

The First-Year Experience
Monograph Series No. 37

Proving and Improving

Volume II:



Tools and Techniques for Assessing the First College Year

Randy L. Swing
Editor



NATIONAL RESOURCE CENTER FOR
THE FIRST-YEAR EXPERIENCE® &
STUDENTS IN TRANSITION
UNIVERSITY OF SOUTH CAROLINA, 2004

POLICY CENTER ON THE FIRST YEAR OF COLLEGE
THE PEW CHARITABLE TRUSTS
THE ATLANTIC PHILANTHROPIES
LUMINA FOUNDATION FOR EDUCATION

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Preface

Mary Stuart Hunter

I know of no other movement in American higher education in the past decade that has spurred more conversation, more consternation, and more concern than that of assessment. Many of us who began our careers prior to the assessment movement in the 1990s have been compelled to learn new skills, engage in assessment activities, appreciate the benefits of quality assessment, and embrace assessment as a central element of our work. Our younger colleagues who entered the higher education arena more recently have also quickly come to know that an understanding of assessment is a fundamental key to effectiveness, institutionalization, and longevity on a program level, as well as a career-building asset on a personal level. As director of the National Resource Center for The First-Year Experience and Students in Transition, it is my pleasure to introduce this timely monograph.

The very existence of the National Resource Center is due in large part to the foresight of the central administration at the University of South Carolina more than a quarter-century ago, who insisted that an experimental course undergo rigorous assessment. The result of these assessment efforts was the institutionalization, growth, and development of the university's first-year seminar, University 101. John N. Gardner, the course director, and his staff founded the National Resource Center in 1986 as an outgrowth of this academic department.

Collaboration with the Policy Center on the First Year of College has made this monograph possible, as their work focuses directly on the improvement of the first college year and the development and dissemination of a range of first-year assessment procedures and tools that can be used to strengthen or confirm practices in the curriculum, co-curriculum, and institutional policy. This monograph is but one of many collaborative projects by our two centers, whose missions both have the improvement of undergraduate education at their cores.

The editor, Randy Swing, opens the monograph with a cogent overview of first-year assessment. In this primer, he makes a strong case for the importance of assessment by outlining the purposes of assessment and describing the qualities of effective assessment in a clear and compelling manner. Practical tips on first steps for getting started in assessment along with a discussion of pitfalls to avoid, help to demystify assessment for even the most apprehensive practitioner. His introduction continues with a discussion of four assessment structures, the two forms

of assessment data, and the myriad sources of assessment data available from which those engaging in assessment can choose. He closes the introductory chapter with a discussion of strategies for organizing for assessment that will be useful to all, from those engaged in assessment for the first time to seasoned institutional researchers.

The balance of this valuable monograph builds on these assessment basics and includes essays and case studies on a variety of noteworthy assessment approaches and topics written by researchers, scholars, and practitioners representing a wide range of institutional settings, allied organizations, and commercial survey instrument developers. The essays are creative and thought provoking and provide a basis for fertile discussions on the countless possibilities for campus-based assessment approaches. A typology of assessment instruments concludes the monograph and enables readers to make an uncomplicated comparison of many of the commercially available assessment surveys.

I am convinced that this monograph will provide assessment novices and seasoned assessment directors alike a new resource that gathers together in a single volume a wealth of ideas on approaches to assessment and detailed information on available assessment tools. All of us at the National Resource Center on The First-Year Experience and Students in Transition at the University of South Carolina and the Policy Center on the First Year of College involved with this project sincerely hope this is so. Assessment of our efforts on behalf of undergraduate students is incredibly important. It is not easy, but it is worthwhile. Not only is assessment critical to the future of our programs and demanded by our institutions and external accrediting bodies, but it can also both help us confirm that our efforts are worthwhile and assist us in continuing to improve what we do.

Best wishes in your endeavors.

Mary Stuart Hunter, Director
National Resource Center for The First-Year Experience and Students in Transition
University of South Carolina
February 2004



Overview of Essays

Randy L. Swing

Increasing enrollments, reductions in funding for higher education, and greater diversity of new students continue to shape the work of instructors and administrators of first-year students at American colleges and universities. Taking pride in “flunking out” large numbers of students is a distant memory on most campuses. Instead, institutions of higher education have increasingly embraced their obligation for assisting students with the transition to the college learning environment. Over the past two decades nearly every campus in America has launched initiatives specifically designed to improve the success of new students. It might be said that the challenge of the last two decades of the 20th century was to disseminate good practices in first-year education and to encourage institutions to embrace their responsibilities for the success of their students. That challenge has, in large measure, been accomplished. The challenges facing educators in the first decades of the new century are to perfect those good practices launched over the last decades, adjust practices to accommodate a more diverse student population, and increase the cost efficiencies of services to new students. These new challenges call for greater knowledge about assessment practices. It is simply not enough to collect anecdotal stories of student success—the refinement of good practices requires systematic and ongoing evaluation of outcomes.

The First-Year Assessment Listserv (FYA-L) is one way that educators are developing their knowledge of assessment tools and techniques. The idea of a listserv focused on first-year assessment was conceived by John N. Gardner and Betsy O. Barefoot as part of a grant application to The Pew Charitable Trusts. That proposal outlined a new organization intended to extend the work of the National Resource Center on The First-Year Experience and Students in Transition with a new focus on assessment as a means to improving the first college year.

The task of establishing the proposed listserv fell to me early in 2000. I accepted the challenge with mixed feelings as it was clear that educators were hungry for help with assessment but, it was also clear that many listservs fail to do more than fill subscribers’ inboxes with disorganized and unhelpful chatter. I decided that an effective listserv needed to deliver meaningful content to busy educators as well as provide opportunities for peer-to-peer sharing of ideas and concerns.

FYA-L was launched in early 2000 with a promise that subscribers would receive, at least twice a month, an invited,

edited essay from an assessment professional or practitioner on a topic relevant to assessing the first college year. Undergirding the concept for these invited essays was a simple philosophy—busy educators could benefit from a brief essay, about 1,000 words, focused on a single “good” assessment idea that could be read and understood in five minutes or less. The essays would be delivered via e-mail and also stored on a web site to enhance the ability of subscribers to retrieve ideas later or to share them easily with others.

This new concept of a listserv as a kind of online magazine caught on. More than 300 subscribers signed on during the first three days of the listserv. The number rose to more than 600 subscribers by the end of the first month and topped 1,200 subscribers within a few months. FYA-L grew to have the largest number of subscribers of any listserv on the topic of higher education assessment—even though the list continued to specialize in assessment topics focused on the first year of college. Those initial essays were collected in a monograph, *Proving and Improving: Strategies for Assessing the First College Year*, published in 2001 by the National Resource Center at the University of South Carolina.

While that first monograph was moving to press, FYA-L continued to deliver invited essays focused on assessment tools and techniques. With the assistance of my colleagues at the Policy Center—Betsy O. Barefoot, Marc Cutright, John N. Gardner, Samantha Landgrover, Michael J. Siegel, and Angie Whiteside—additional invited essays were collected, edited, and shared with subscribers. FYA-L continues to operate as a joint venture of the Policy Center and the National Resource Center under the editorial leadership of Michael J. Siegel and Steven W. Schwartz.

Essays from FYA-L along with a number of new contributions comprise this second monograph, *Proving and Improving Volume II: Tools and Techniques for Assessing the First College Year*.¹ Written for educators with little or moderate experience assessing first-year students and initiatives the monograph provides an overview of assessment and specific ideas for a variety of assessment activities. The monograph also includes a detailed typology of first-year assessment instruments which will be helpful to even experienced assessment practitioners. The monograph includes the following sections.

- “An Introduction to First-Year Assessment” provides a primer on assessment that identifies good practices, steps, and structures for starting an assessment initiative and tips for organizing assessment efforts.
- Part I is built on the premise of using existing data before collecting new data and focuses on how institutional records can be used in first-year assessment.
- Part II provides advice about methods for collecting, analyzing, and using the “student voice”—captured through student interviews or journals—in first-year assessment.
- Part III focuses on methods to evaluate a first-year initiative using focus groups or classroom environment inventories.
- Part IV contains essays about a variety of specific assessment survey instruments.
- Part V contains a discussion of instruments and structures designed to examine cognitive development in students.
- Part VI offers essays on instruments designed to examine specific student traits.
- Appendix A provides a typology of instruments commonly used in first-year assessment efforts. The typology includes contact information and is cross-referenced to essays in this monograph.

Whether read from cover to cover or used as a reference guide to assessment instruments, Volume II provides a wide array of ideas and resources for gaining new perspectives on the first college year. These essays share a common element—they are presented not as a call to conduct assessment for assessment's sake but rather for assessment to be a means to the greater end of improving the first year of college for all new students.

Randy L. Swing, Co-Director and Senior Scholar
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Brevard College
February 2004

Notes

¹ Special thanks are extended to Tracy L. Skipper, Editorial Projects Coordinator at the National Resource Center for The First-Year Experience and Students in Transition. Tracy's editorial skills greatly improved every essay in this monograph. She created the organizational structure for the monograph and oversaw the full production process. Simply stated, this monograph was guided and moved forward at every step of the process by Tracy.



Introduction to First-Year Assessment

Randy L. Swing

The “accountability movement” in American higher education, and around the world, has challenged educators to “prove” that our efforts matter—that our educational goals are advanced by the work that we do. Many educators now find their job description includes “assessing learning outcomes” or “measuring institutional effectiveness.” Rather than being an unwelcome intrusion, most educators are embracing assessment efforts because such efforts dovetail nicely with professional curiosity about effective educational practices and commitment to first-year students. Still, few educators have received adequate preparation for roles in assessment through traditional disciplinary or student affairs graduate programs.

This chapter, and indeed this entire monograph, is intended to provide assistance to educators charged with assessment responsibilities related to the first year of college. Moreover, this chapter serves as a primer—an overview—of assessment structures and decisions. In essence, this opening section answers the question, “How would you know high-quality assessment of the first year if you saw it?”

In a nutshell, high-quality assessment always leads to one of two outcomes: It either creates improvement or confirms existing practice. Notice what was not mentioned. Production of reams of “interesting data” or the identification of problems outside of institutional control (e.g., poverty, changes in demographics) are not hallmarks of effective assessment. Stated in other words, assessment is not an end in itself but always a means to one of two desirable ends: (a) improvement of individual or program performance or (b) confirmation of existing practice. The measure of high-quality assessment, then, is best established by how, or if, the assessment results are used. It is not enough simply to fill book shelves with unread reports and undigested data even if these were produced by methodologically perfect assessment practices.

Proving the efficacy of existing structures and increasing desired individual or program-level outcomes through improvement of existing practices or development of new practices are equally valued outcomes of effective assessment. Whether the intention is to “prove or improve,” assessment does not start with the assumption that something is wrong or that the purpose of assessment is to find problem areas. Rather, the opening assumption holds that it is as important to know what is working well, so those components can be protected and supported, as it is to find areas where improvement is needed.

Qualities of Effective Assessment

The good news is that much has been learned over the past two decades about how to structure assessment activities that are likely to result in useful outcomes. High-quality assessment:

- *Focuses on what matters most.* There are always numerous “interesting questions,” but assessment is not simply an intellectual exercise. High-quality assessment springs from an organization’s well-defined goals, objectives, and mission. Clarity about desired outcomes is the first step in successful assessment.
- *Focuses on elements that the organization can change.* Little can be gained by studying fixed characteristics or conditions that are exceedingly difficult to change.
- *Is built on the goodwill of participants and stakeholders.* Assessment efforts that are properly timed, orchestrated, and explained to participants are more likely to produce trustworthy data and outcomes.
- *Is multidimensional.* Assessment seldom meets the rigorous standards of controlled experimentation, but it can produce credible results when information is established through corroborating studies using multiple measures and methods.
- *Includes input from all stakeholders.* Externally mandated and contrived assessment is less likely to produce meaningful change than assessment created by and for those directly involved in the assessed activity.
- *Places findings in an appropriate context.* Comparative benchmarks, longitudinal data, and / or professional judgments are needed to provide context for assessment findings.
- *Produces comprehensible results.* Assessment reports are written in accessible language for each target audience. A general rule of thumb is that aggregated data may be widely disseminated, but data that potentially could identify a specific individual should be treated with the highest level of confidentiality and disseminated with great care. Reports should be written at the appropriate level of specificity for each target audience (e.g., executive summary, concise edition, full report).
- *Is disseminated and used.* Results must be shared with the individuals who shape the desired outcome, and decision makers should cite the use of assessment data that inform campus decisions.

Getting Started

There are plenty of potential potholes in the assessment planning phase but most will create no more than a minor bump in the road to a successfully completed assessment. One notable exception is the very serious calamity known as “assessment paralysis,” the decision that nothing can be done because the perfect assessment plan cannot be established. Every assessment plan has limitations and any perfectly controlled assessment, if such even exists, is unlikely to be “doable” in a real world environment. The key to success is to acknowledge the limitations of assessment methods and either accept them or design multiple assessment activities that have different limitations. It is quite common for assessment plans to evolve over time rather than be fully formed when initially launched, so even a partial outline may be sufficient to start.

This advice is not intended to suggest that sloppy assessment structures are to be tolerated; rather, the recommendation is to start simple and grow the complexity of the assessment efforts over time. When starting a new assessment program, a number of very basic questions simply will not have been studied. Targeting those most doable issues first allows the complexity of assessment efforts to evolve as the institution's assessment skills develop.

A second potential pitfall is failing to establish whether the purpose of the assessment is to evaluate individuals or programs. Begin with the notion that every assessment effort is intended to evaluate either individual-level or program-level outcomes. In both cases, data will be collected from students or about students, but in the former, each student's data stands alone, while in the latter, student data are aggregated to establish the "average" experience of students with a program, course, event, or structure. The difference is huge. When assessing individual students, the results must be *very* accurate—especially if the results have consequences for the student such as placement in or out of special courses or admission to a program/major. When measuring attributes of individuals, it is imperative that the assessment tools be proven to be reliable (i.e., having little arbitrary variance so that about the same outcome would be expected if an individual were tested twice). Reliable assessment instruments are time consuming to construct and should be undertaken only with adequate lead time and significant resources. Development of individual-level assessment tools typically should be left to measurement and testing professionals. Given the cost of time and resources, institutions should look for existing commercially available instruments before undertaking development of new instruments.

Ideally, program-level assessments would also be built from highly reliable instruments, but when data are aggregated a degree of unexplainable variance will have little effect on the assessment result. For every individual where the score is a little high, there will be another individual where the score is a little low so the results balance out in the aggregate. In other words, program-level assessment can be reasonably achieved with instruments that are not as "perfect" as those required when performing individual-level assessment.

In reality, individual-level assessments can be effectively aggregated to form program-level assessment. For example, a highly reliable exit assessment that determines whether individuals "pass" or "fail" could also be used to evaluate the overall effectiveness of a program for all participants by aggregating the individual results. The problem occurs when assessment moves in the opposite direction—from program-level to individual-level. Analysis of program-level assessment, for example, may reveal which students scored lower than others on some outcome measure such as writing, computing, or public speaking. The temptation is to "remediate" those lower scoring students. Great caution is needed when switching from evaluating programs to evaluating individuals unless the reliability of the instrument used is well-documented and the potential use of the result was explained to participants prior to the measurement. If students will be individually evaluated, they must be told about the purposes and consequences of the assessment before data are collected.

Assessment Structures

Four forms of assessment (i.e., criterion referenced, value added, benchmarking, and prediction) undergird the majority of all higher education assessment activities. While a full review of assessment structures is beyond the scope of this chapter, a basic understanding of these four assessment structures will guide many of the decisions needed in developing an assessment plan.

Criterion Referenced

Criterion-referenced assessment structures evaluate individuals or units against an established criterion, often called a “cut score” or “minimum score.” A criterion-referenced assessment commonly used in the first year of college is the writing placement test that has one or more pre-established “passing” scores. The score on the test might, for example, determine the examinee’s placement in a developmental, first-level, or advanced English course. The purpose of criterion-referenced assessment is to determine if individuals or programs are above or below an established level set for passing.

Criterion-referenced assessments provide valuable information about the level of outcome achieved. However, they are an incomplete assessment model because they provide very limited information, if any at all, to support change or confirm which practices contributed to the outcomes. Generally, such assessments are better suited to point out shortcomings of existing programs or individual achievement than to provide methods for improvement when outcomes fall short of expectations.

Value-Added Assessment

The structure which has become the “gold standard” in assessment is the value-added model created by Astin (1991). The concept appears quite simple at first, but the complexity becomes apparent as the model is used to assess first-year students and programs.

Value-added assessment depends on three pieces of data: input, environment, and outcomes. Input variables represent the baseline or conditions before “treatment.” In first-year assessment that means knowing about the skills, knowledge, attitudes, or characteristics that students possess as they enter college. Input measures may reflect admissions decisions, but generally do not reflect impact of the college on students because they are taken before the student has experienced significant interaction with the institution. In other words, an institution that recruits a “better” set of students cannot be said to have created those “better” students simply based on higher levels of desirable measures at the point of entry into college.

Environment variables record what students do while enrolled in the first year of college. Some environmental measures are simply dichotomies such as whether a student did or did not enroll in a particular course or attend some student support initiative. Other measures are continuous variables, meaning they are measures of degree or frequency, such as how many hours per week a student works for pay or studies. Measurements of environment variables are necessary because all students, even if they attend the same institution, have varying patterns of engagement with the institution. Even when student participation is required, the level of engagement is likely to vary greatly so it is imperative to establish how much students participated in the intended educational experience as part of evaluating the experience. For example, as any instructor of a first-year seminar can attest, some students who enroll in a seminar actively engage in activities, while others only show up for class occasionally! Clearly it cannot be said that both kinds of students received the same educational experience though both are on the same class roster. Environment measures establish what students do, individually or collectively. These measures may focus on educational practices designed by institutions of higher education or on student choices for how they spend their time outside formal educational structures.

Outcome measures are collected at the end of educational experiences (i.e., summative measures) or at any point after an educational experience begins (i.e., formative measures). Outcome measures should closely align with the goals and objectives of the educational

intervention to be evaluated. While unintended outcomes are likely and the discovery of those may have significance, the purpose of first-year assessment is normally focused on determining the level at which specific and intentional outcomes occurred. In general, it is not efficient to toss a broad net to “discover” what outcomes developed. Focusing on a limited set of desired outcomes is more likely to produce information that can guide program improvement or confirm existing practices.

These three data points, I, E, and O, become an effective assessment model when inputs and environments can explain differences in net outcomes (i.e., observed outcomes less the base-line measurement of that outcome). Perhaps the best way to explain the I-E-O assessment model is to explore how *incomplete* models fail to be valuable. Below are examples of four incomplete I-E-O models (or how NOT to do assessment!)

1. *An outcomes-only model*, as the name indicates, is limited to measures of outcomes only. The model does not contain information about entry-level characteristics or what environments students participate in during the first year. Only the level of achievement for a specific outcome is known. Such models lack the evidence needed to link outcomes to specific college experiences or to show that outcomes are greater than they were at the point of entry. As such, the model cannot confirm current practice or suggest how current practice could be improved.
2. *An environment-only model* can produce interesting findings that describe student experiences. It has been popular, for example, to count the percentage of students who consume alcohol in the first year, attend tutoring, or enroll in a first-year seminar. These data are simply counts of actions. In the absence of input or outcome data they are not very helpful in understanding how experiences impact students. When the environment-only data are collected as continuous variables they might take on the appearance of greater usefulness. For example, an assessment of the study patterns of students might ask students to report how many hours per week they study. The results can be reported as an array (e.g., 5% studied one hour per week, 7% studied two hours per week, 1% studied 20 hours per week, and so on). The assumption that more is better or that each level marks a significant difference from the level immediately above or below makes an environment-only continuous variable model appear to be effective, but in the absence of outcome data such conclusions must be made with great caution as research does not always support intuitively “obvious” conclusions.
3. *An input-outcome model* can be very appealing because it does produce some valuable information and answers the question, “Did students change during the first year?” In essence, this model provides a pre-test and post-test of variables of interest so it can be determined if the selected variable increased, decreased, or remained stable across the first year. The model is incomplete, however, because it lacks information about what occurred between the two measurement points that could have had an impact on the desired outcome. This model may be useful in pointing out that growth did or did not happen, but it would not make clear which existing practices were effective/ineffective or which practices should be continued or improved.
4. *Environment-outcome models* are frequently misused in higher education assessment. A classic example is comparing students who enroll in a learning communities program with those who do not enroll (environment) on measures

such as persistence, writing skill, or grade-point average (outcomes). It is exciting to discover that participants in an intervention have higher outcomes than non-participants, but in reality the model fails in the absence of input data that would eliminate the alternative explanations that (a) the group in the intervention entered with different potential for success from the start and (b) the outcome was already present at the start and no change actually occurred. The environment-outcome model cannot confirm existing practice nor guide improvement because the impact of the intervention cannot be isolated from potentially confounding input variables.

Unlike the incomplete models noted above, when all three data points (i.e., input, environment, and outcome) are present, the I-E-O model presents the best opportunity for confirming existing practice or guiding change. The results of such assessment are easy to explain because they show how characteristics present at entry, combined with collegiate experiences, produce intended outcomes. The model also allows for very complex analyses of the interactions of multiple variables and outcomes.

Benchmarking

Benchmarking structures are used to contextualize findings so that they are interpretable. Once an outcome has been measured the next question is “Does the measure indicate more or less achievement than would have been commonly expected?” One way to answer that question is to compare local outcomes to those of other organizations using the same or similar measurements. For example, we know that first- to second-year persistence rates vary by level of institutional selectivity and are influenced by the presence of interventions such as first-year seminars and learning communities. A benchmarking assessment of student persistence can be used to compare the persistence data from several institutions that recruit similar types of first-year students and offer similar first-year structures.

Benchmarking is a variation of the I-E-O model wherein only the outcomes are measured. Input and environment measurements are not used directly, but only in the process of selecting peer comparisons (i.e., other units within an institution or similar “other” institutions). The selection of appropriate peers should ensure that the input variables and the environment variables are likely to be very similar, or in the language of statisticians, the I and E are “controlled for” or “held constant” so that the focus is only on changes in the O. For example, an institution with an average SAT of 1100 would first develop a list of other institutions with similar average SATs. The list would be refined by subsequently selecting only institutions offering similar first-year initiatives. The list could be further narrowed by restricting selection to institutions in the same geographic region, Carnegie classification, or some other useful criterion.

Benchmarking explains how outcomes can vary when similar services are provided to similar students by evaluating differences in the *quality* of the environments that contributed to the outcomes. For example, no differences in outcomes would be expected when comparing two similarly situated first-year seminars enrolling similarly situated students if the two courses were of similar quality. If differences are found, then the next step in assessment would be to investigate the quality of the seminar delivery. Were teachers at the higher performing institutions trained more effectively? Did they use better teaching techniques? Were they more committed to their students, or otherwise delivering a more powerful intervention?

An alternative to peer benchmarking is to compare outcomes with aspirant peers (i.e., places that the local institution/unit would like to emulate). By benchmarking against aspirant peers an organization can estimate the gains in outcomes that might occur if they emulated what the comparison group is already doing.

Prediction Assessment

The last of the four basic assessment structures focuses on the prediction of future outcomes. These assessments are a variation on the I-E-O model in that measured input and environment variables pass through a statistical modeling procedure to predict the level of outcome that would be expected if no additional intervention occurred. This form of assessment is frequently used in the first year to identify “high-risk” students before some undesirable outcome occurs (e.g., low GPA, dropping out, judicial action). In the first stage of such assessment, historical data are used to establish a model based on known inputs, environments, and outcomes. Local prediction models can be developed (e.g., institutional research officers on many campuses are experienced in this kind of statistical modeling), but it is more common for these models to be developed through national, multi-institutional research efforts.

Prediction models can produce high-quality assessment outcomes by confirming that existing practices are effective or by showing where improvements might be made. These forms of assessment pose an ethical dilemma between focus on the assessment as a research initiative or improvement activity. It is rare, and ethically challenging, for institutions to assess the likelihood of a negative outcome occurring and then do nothing to attempt to change the outcome. If interventions are attempted and the ultimate outcome is different than the predicted outcome it becomes impossible to determine if the intervention caused the improved outcome to be different than the prediction or if the outcome was inaccurately predicted by the model. Acting on results created by prediction models compromises the ability to “prove” the model’s accuracy but provides opportunity to change, and hopefully improve, the outcome for students immediately. It is not a difficult choice for most educators working with first-year students to care more about helping every student succeed than statistically proving a theoretical model.

Forms of Assessment Data

A common misconception is that the terms “qualitative” and “quantitative” refer to different assessment structures. These terms define types of data, not assessment structures. Quantitative data are usually number-based and can be analyzed with statistical techniques. Qualitative data are usually word-based, although art and other forms of expression can also be used. Qualitative data are analyzed with special computer software or data reduction techniques that do not initially rely on statistical comparisons. In general, quantitative data are used to find statistical relationships between variables, and qualitative data are used to find themes and non-statistical relationships among variables.

One of the principles of high-quality assessment suggested earlier in this chapter was the use of multiple views and multiple data sources. Rarely will either qualitative or quantitative data be adequate if used alone. Traditional research has relied mainly on quantitative data, but advances in research methodology and computing technology have increased the acceptance of qualitative analyses in higher education assessment. Any of the four assessment structures presented in the prior section can use either quantitative or qualitative data, and all are strengthened when both quantitative and qualitative data are employed in the assessment design.

Sources of Assessment Data

Perhaps the best advice anyone undertaking a new assessment activity can receive—and the advice that is so rarely taken—is to use existing data before deciding to collect new forms of assessment evidence. Because institutions of higher education are large and loosely connected structures, it is unlikely that anyone on campus, including the registrar, institutional research officer, or director of administrative computing, knows about all the data sources that exist on a campus. Time spent exploring data sources may uncover an array of data that could be used to investigate first-year initiatives or be useful in conducting assessment of first-year students. The National Center for Higher Education Management Systems (NCHEMS) and the Policy Center on the First Year of College have produced a guide for an extensive “audit” of first-year data sources that could be used as a first process in a systematic assessment of the first year. NCHEMS’s *Data Audit Toolkit*, described in detail by Karen Paulson later in this monograph, helps expand the concept of data sources that could be useful in studying the first year of college. For example, a computerized list of students and parents who attended new student orientation could be viewed as useful only in printing name tags, without acknowledgement that the same list could be used as a data source to determine if attendance at an orientation session contributed to any other first-year outcome of interest. *The Data Audit Toolkit* procedure helps institutions find “hidden” data sources and evaluate the trustworthiness of each data source. In the example above, it would be important to know when the orientation list was created and if it was updated to remove the names of people who registered but did not attend. There will likely be some limitations anytime data collected for one purpose are subsequently used for a different purpose. The savings in time and costs may offset these limitations.

Many sources of data exist for use in first-year assessment activities. The following descriptions suggest some of these sources.

Institutional Records

Many institutional research offices have a plethora of data on first-year students and initiatives. If the campus receives federally funded student financial aid, it is mandated to prepare reports for the Integrated Postsecondary Education Data System (IPEDS), which contains data about student enrollments, faculty characteristics, institutional resources, and more. IPEDS records are public data sources so there should be little difficulty in accessing aggregated data from these reports. The IR office typically is the source of a number of other reports to college guidebooks, news magazines, and national research efforts. The first stop in a new assessment effort should be the campus’s institutional research office to determine what data are already available.

An equally important source of data is the registrar/student records office. Student grades, courses taken, enrollment terms, and more are standard records in the registrar’s office. Because many of the data sources in the registrar’s office are protected by the Family Educational Records and Privacy Act (FERPA), researchers will need to qualify to use these records. In general, institutions are free to use student records for purposes that improve educational practices. To ensure compliance with FERPA and other guidelines for the protection of human subjects, most institutions of higher education have created a formal structure, the Institutional Review Board (IRB), for certifying the use of campus data. It is common practice for the IRB to review an application for use of existing data or collection of new data to be used in campus assessment activities. Generally, use of data for assessment purposes are considered “exempt” from IRB oversight, but that status will

be determined by the IRB review process. Exempt simply means that use of the data does not constitute a significant threat to privacy or rights of human subjects and, as such, is exempt from oversight by the IRB.

If use of the data is not determined to be “exempt,” an IRB may still approve the study if certain conditions are met. For example, an IRB might stipulate rules for securely storing data, a schedule for destroying data upon the conclusion of their approved use, or that participation in a study be voluntary. Assessment practitioners must think ahead when applying for IRB approval as the conditions of the review might be different if the assessment results will be shared off campus, such as at a first-year conference or in an external publication. The IRB application should include notice of the possibility that the results will also be used as externally disseminated scholarship.

Student Interviews

It may be deceptively simple, but the best source of data is likely first-year students themselves. Student interviews are one way to capture this data. The downside of interviews is that data collection can be time consuming. Focus groups, a way to interview a number of students at one time, have the advantage of producing data from more students than individual interviews. The decision to conduct group or individual interviews should be guided by the type of information desired. Individual interviews are normally used to explore sensitive or private issues or when the evaluator is interested in very detailed reports from a small number of individuals. More information about traditional focus groups is provided by Libby Morris’ essay in this monograph.

Student Writing

Student journals, one-minute papers (see Angelo & Cross, 1993), and course embedded assignments are similar to student interviews but can be readily collected from a large sample of students. The essay by Elizabeth Hodges and Jean Yerian in this monograph about the Prompts Project at Virginia Commonwealth is an excellent example of using student writing for assessment purposes. The use of portfolios and electronic journals has made the collection and analyses of writing-based data more efficient.

Surveys

The advent of inexpensive photocopying, bubble-form publishing, and computerized data scanning equipment make paper and pencil surveys the major source of data in higher education assessment. In recent years, the paperless survey or web-based survey has reduced costs of data collection significantly and proven to be popular with students. There are numerous books available on designing and administering surveys, so this section will focus instead on the content areas of commercially available surveys that are commonly used to assess first-year initiatives and first-year students. These categories correspond with the typology of instruments located at the end of this monograph.

Pre-enrollment/baseline data. These surveys are administered near the end of high school, during the admissions process, during new student orientation, or at any point prior to significant experience with an institution of higher education. Survey participants report their expectations, impressions, goals, or hopes for the college experience, or they report their pre-enrollment behaviors and experiences. Data from these surveys

do not reflect impact of the campus on students as they will have had only limited exposure to the campus prior to completing these surveys. Instead, these surveys can

- Provide baseline data, telling us who our students are at the point of entry
- Form gain scores when matched with post-tests
- Provide co-variables and controls for advanced statistical evaluations
- Assess the needs of new students
- Monitor change in entering student characteristics if repeated over time

Surveys of outcomes and experiences in the first college year. These surveys are designed for use near the end of the first college year and collect a multi-perspective report about collegiate experiences. There are only three national instruments designed for use at the end of the first year, and each has been developed within the last five years as part of The Pew Charitable Trusts' accountability agenda for higher education. The intended timing of these surveys is their common link; otherwise, the three instruments are very different in that one is designed just for use in community colleges, one for use at four-year institutions only, and the third for use at both two- and four-year institutions. Two of the instruments (one for two-year institutions and one for four-year institutions) focus on student engagement with higher education in terms of how students spend their time. The other instrument collects a wide array of student opinions, beliefs, and behaviors. One instrument is designed to assess both first-year and senior students; another is designed as a post-test when combined with a matching survey at the college entry point, and the third survey is not specifically designed as a repeat measure.

General surveys of student behavior, attitudes, study skills, satisfaction, and experiences. These surveys take a holistic approach by collecting information on a variety of college experiences and environments. While there is some overlap in content for these instruments, they each focus on a unique aspect of the first year and factor analyses can be used to group items into higher order constructs. Examples of topics included on these surveys are

- "Average time" spent on academic and co-curricular tasks
- Frequency of contact with peers, faculty, and staff
- Self-reported gains in knowledge and self-confidence
- Self-reported levels of knowledge and academic skills
- Study skills such as time-management and note-taking
- Satisfaction with college
- Alcohol / drug use
- Life management skills (e.g., relationship with roommate, parents, partners)

Surveys of specific services/units/programs. These surveys deeply investigate a particular slice of the college experience with a series of narrowly drawn and specific questions about the full range of a given service, unit, or program. These instruments are built from items similar to those listed in the previous section. Instruments may include demographic and self-report questions so that results can be disaggregated by sub-populations. Areas with specialized survey instruments include:

- Academic advising
- Residence life
- Campus student unions
- First-year seminars

Surveys of specific populations. These surveys provide information to evaluate the experiences, satisfaction, or behaviors of a specific group of students. These instruments are not created exclusively for use in the first year but contain demographic variables so that first-year student responses can be selected from a population including upper-class students. Survey items are similar to those in the two preceding sections. It is the focus on a specific group, cohort, or sub-population which sets these instruments apart. Examples of sub-populations include:

- Adult learners
- Fraternity or sorority members
- Non-returning students

Placement and academic knowledge surveys/tests. These instruments are designed to test academic knowledge and skills. Unlike opinion and satisfaction surveys, these instruments usually have a right answer and the student is judged on his/her ability to select the best (right) answer. Some instruments contain a mix of discipline topics, but it is more common for tests to be designed to measure one specific knowledge domain. The use of these instruments may vary depending on the timing of the test. Measurements taken during new-student orientations are often designed to place students in the appropriate level of college courses based on knowledge at the point of admissions. Measurements taken at the end of the first year or in later years may be used to evaluate curricula or as individual assessments that serve as entrance requirements for a special major/department. Examples of instrument focus include:

- Writing
- Critical thinking
- Mathematics reasoning
- General education humanities
- Biological science

End of program/course evaluations. Several commercially available instruments have been designed for course evaluation. These instruments can be part of an assessment strategy, especially as a way to evaluate a program or campus-wide initiative. They are problematic for two reasons. First, the purpose of assessment is not to evaluate individual instructors, so any use of course evaluations that contain data about individual teachers raises the possibility that the data might be misused. Course evaluations used in the aggregate, however, can constitute effective evaluation of first-year initiatives. A second limitation in using course evaluations is that these instruments rarely contain demographic questions about respondents, so the lack of ability to merge these data with existing student records or to disaggregate these by sub-populations limits the usefulness of these data. Examples of items include:

- Evaluation of course textbook(s)
- Evaluation of teacher's classroom presence and effectiveness
- Evaluation of teacher's out-of-class availability
- Evaluation of course content
- Evaluation of perceived fairness in grading

Organizing for Assessment

A first-year assessment activity may occur in a single classroom and involve only a dozen students, in a large lecture hall with hundreds of students, or via web-based or e-mail survey with an infinite number of students. Assessment may be focused on any subgroup from a cohort residing in the same residence hall to large groups who share some other common characteristic. Many first-year assessment activities involve all or nearly all students who entered college in the same academic term and so may involve from a hundred to several thousand students. Whether a large-scale assessment that requires months of preparation or a small-scale assessment that can be arranged in just a few minutes, some basic organizing principles exist to ensure that the way the assessment is conducted does not unduly bias the results.

1. *Involve students.* The good will of students undergirds successful assessment. Bombarding students with surveys and tests is likely to discourage their participation, reduce the level of effort given, and spoil reliability of the measures. Assessment designs that judiciously use student time are more likely to produce appropriately high student effort and thus produce trustworthy data. Institutions are responsible for building and maintaining the good will of students toward assessment. Using focus groups, having students proctor surveys, asking students to help interpret results, letting students know how the institution uses assessment outcomes, and avoiding too many surveys are all ways to honor the involvement of students both as subjects and participants in assessment efforts.
2. *Use sampling.* Often, little is gained by surveying every student. A carefully controlled sampling procedure will produce the same results as a population study. A limitation is that samples cannot always be disaggregated to study every sub-population (i.e., the numbers become too small when the sample is divided into many sub-groups).
3. *Divide and conquer.* Multiple opportunities exist for data collection. For example, institutions might collect one survey during summer orientation, another during move-in day, and another at the first class. Ideally, assessment should be thought of as a long-term, on-going collection of events rather than as a one-time event.
4. *Use existing data whenever possible.* A data audit often reveals that institutions hold great quantities of useable data that can be connected in a central dataset. Whenever possible, student identifiers should be used to link datasets—especially to make use of demographic data already on file. Many assessment efforts start with time-consuming data collection and bog down during the data analysis phase. Existing data reduces collection time and increases time available to disaggregate, analyze, and report findings.
5. *Embed assessment in courses.* Student time is used wisely and many motivational issues are resolved when “regular” course exams and assignments are also used to create data for assessment purposes. Since course enrollments are not usually the result of random assignment, these data must be reviewed to determine the impact of self-selection on them.
6. *Use assessment days.* Dedicating a day or half-day for assessment activities separate from class and orientation activities is another strategy for maximizing the students’ and institution’s time. The likelihood of student participation

- can be increased by linking assessment activities to a reward, such as participation in early registration for the next academic term.
7. *Sample classes – not students.* An alternative to sampling the student population for a program-wide or campus-wide assessment is to sample the population of classes. A random or stratified sample of courses/class times will capture a diverse sample of students. A team of peer assistants, who visit the selected classes, can administer the surveys. Clearly, this strategy requires support from faculty and advance planning.
 8. *Use cohort-based assessment cycles.* Every year's entering class can be seen as a cohort to be surveyed on one topic at various points in their educational experience. For example, the assessment effort might focus on topic X for the entering class of 2005 and then on topic Y for the entering class of 2006. Over time, each cohort adds to the institutional knowledge base. This concept reduces the data overload often produced by assessment efforts. It may, however, result in some limitations due to cross-sectional methodologies.
 9. *Pay attention to response rates.* Assessment built on a low-response rate is ripe for criticism and dismissal of the findings. Use a sample size and method that you can control, follow-up, and "work" to accomplish response rates above 50% of the sample. No matter the response rate, the researcher must examine the sample to determine if respondents are representative of the population of interest. A high response rate can still contain a systematic bias, while a low response rate could be "random" and highly representative. Researchers should look for evidence that the sample is representative on gender, race, and other characteristics.
 10. *Signal the importance of assessment.* Researchers should not assume that students or faculty know why the institution is conducting assessment. Using the appropriate mix of seriousness and fun, holding students accountable, and intentionally establishing a culture of assessment are strategies for underscoring the importance of assessment.

Bringing it All Together

The preceding "primer" highlights key decisions and opportunities in developing assessment activities aimed at proving or improving the first year of college. Such efforts might produce greater resource allocations or increased respect for work with first-year students, but the main reason for undertaking assessment is to learn how best to achieve the goals and hopes for success for every first-year student. While there are many "right" ways to develop the information needed for long-term planning and implementation of effective first-year efforts, the most essential step in assessment is to begin! Our first-year students deserve no less than our professional curiosity and willingness to challenge ourselves to constantly improve the first year of college.

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Author's Note

Some portions of this chapter were originally developed by the author for use in conference concurrent sessions, teleconferences, and workshops.

Part 1



Institutional Records



Introducing The Data Audit and Analysis Toolkit

Karen Paulson

The Data Audit and Analysis Project is a collaborative effort between The Policy Center on the First Year of College and the National Center for Higher Education Management Systems (NCHEMS) designed to assist institutions in local data source compilation, data assembly, and data analysis procedures. The basic objective of a “data audit” as it relates to the first year of college is to identify and inventory data sources and needs within an institution so that a range of analyses about the first year can be conducted. In short, a data audit allows an institution to periodically and systematically take stock of, and then mobilize, its data resources. The project resulted in *The Data Audit and Analysis Toolkit*, a comprehensive collection of materials, resources, and guidelines, and the focus of this essay.

This essay builds on an earlier essay by my colleague, Peter Ewell (2001), entitled “Data Audit.” He emphasized how the use of assessment in the first year of college could be a model for an institution creating a “culture of evidence.” Assessment often begins with taking stock of data that already exists. His initial thinking provided the impetus for the *Data Audit Toolkit*, a project funded by The Pew Charitable Trusts and The Atlantic Philanthropies.

In a pilot study, 10 institutions tested the functionality of data audit tools and materials and assessed the key factors during implementation of the data audit process. The pilot group included three technical or community colleges, two private institutions, and five public institutions of varying sizes and structures. The institutions were Augustana College (Illinois), The University of Minnesota-Duluth, Ohio University, Northeastern State Technical and Community College (Tennessee), The University of El-Paso, University of Cincinnati, Lynchburg College (Virginia), Blue Ridge Community College (Virginia), Santa Fe Community College (Florida), and Washington State University. These institutions participated for a variety of reasons, including preparation for accreditation self-studies, implementation of new academic information systems, and a desire to focus more on assessment.

The Data Audit and Analysis Toolkit describes a process that an institution would likely want to complete once every five or so years in order to assess its approach to the first college year and develop a complete inventory of current available data. It provides a step-by-step explanation of how personnel at an institution can inventory both official and unofficial data in use

at the institution and can serve as a first step in developing a "culture of data use" at an institution. The process described in the *Toolkit* is a method for identifying institutional inefficiencies in terms of data overlaps or gaps. In addition, it is also a method for identifying inconsistencies in data definition and use across the institution. While the focus of the *Toolkit* is on the first year of college, colleges and universities can expand the process beyond the first year.

Highlights of data audit procedures are excerpted from *The Data Audit and Analysis Toolkit* below. The *Toolkit* provides a broader and more advanced step-by-step process for conducting a data audit. Please note, however, that although institutions should strive to accomplish these steps, it is important to be flexible in carrying out the task.

1. Identify offices and units across campus that gather or keep data as well as those offices and units that use or report data.
2. Contact appropriate individuals who can fairly represent the resources and perspectives of these offices and units.
3. Set up mutually agreeable times to visit these individuals *in their offices* in order to discuss data sources and data uses.
4. Approximately one week before the visit, send these individuals a list of the questions to be discussed and the artifacts or documents you will want to collect from them. If a particular office is only a data-source office or only a data-use unit, adjust the list of questions accordingly.
5. Conduct the site visit. Ask your questions. Clarify, clarify, clarify. Take detailed notes. Collect artifacts and documents. Where appropriate, "walk through the process" by simulating the steps a student (or faculty/staff member) would take, or follow the path of a particular data element from point of collection through data entry, archiving, and use.
6. Before leaving, thank the people involved for their time and help. Invite them to contact you if they think of anything further that might be of use. Secure an agreement that should there be any follow-up questions, they will be willing to respond to them. Confirm their telephone numbers or e-mail addresses.
7. Send thank-you notes to people you visited and interviewed.

Different institutions may require somewhat different approaches because of their organizational structures and politics. At the same time, an office or individual (usually the Office of Institutional Research or its equivalent) may have already accomplished much of the work included in a data audit. Where this is the case, it is useful to refer to this earlier work as a starting point. A previous data audit does not preclude a second one as things may have changed or been overlooked in the earlier process.

Based on feedback from participants at the pilot institutions, the *Toolkit* includes:

- A Technical Manual for institutional personnel who will be conducting day-to-day activities, including interviews that are part of the data audit. Participants in the pilot study pointed out the importance of having the flexibility to copy pages as needed as well as to interleave pages of local institutional information with Toolkit pages. Thus, the Technical Manual is published in a three-ring binder format.
- An Administrative Rationale offering an executive overview for administrators. While administrators are key to creating a culture of data use on campus, they do not need to understand the process of conducting a data audit in detail. The Administrative Rationale contains an abbreviated version of the contents of the technical manual with just the chapters about data use. This shorter pamphlet can be given to institutional administrators to apprise them of what a data audit entails and how it can be a launching point for a culture of evidence.
- A CD-ROM containing the data element lists that encompass data often included in student information systems, assessment offices, personnel systems, service office units, and facilities. Similarly, examples of charts and tables that have been found useful when looking at first-year activities at other institutions are also included in both hard copy and electronic forms. How an institution uses these resources depends on its needs. One institution might already collect all the data elements; another might find data it would like to start collecting. Institutions can use these lists as guides to determine if they are gathering data they want to in order to conduct more thorough analyses of the first college year.

The *Toolkit* is not a method for collecting *new* assessment data. It is not a plug-in electronic tool for calculating analyses. It does not contain new survey instruments, and it is not an ongoing expense. Rather, *The Data Audit and Analysis Toolkit* is designed to support the early steps an institution takes to determine what data are available on campus about first-year students. The audit allows an institution to identify existing data collection routines as well as what data are necessary for reporting to various groups, both internal and external. Once data are known, better analyses and better uses of data can be achieved. Even at institutions where few data are collected, an understanding of what data are available and how it is used can lead to more nuanced and targeted discussions about assessment of the first year of college.

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Your First Stop for Information: The Office of Institutional Research

Karen Webber Bauer

First-year program administrators are challenged with many tasks—creating, managing, assessing, and re-evaluating programs. With so much to do, it is important to consider how FYE administrators can most efficiently manage their duties. One way to be efficient is to know what information about the institution and its members is already available. Happily, the institution's Office of Institutional Research (IR) has data and information that can be of great assistance. There are several important reasons why the IR office should be a first stop for information. Because of the information collected and reported, IR officials are very knowledgeable about students. In addition, they are knowledgeable about assessment techniques, and trends in the numbers of students, faculty and staff, and they often serve as campus consultants for the development and analysis of surveys and focus groups.

Because the mission of a traditional IR office is to gather, store, report, and analyze data, IR officials may likely have data that is important to FYE administrators. This data may exist in both standard reports of raw data, as well as written reports that summarize information. For example, IR professionals gather and maintain relevant information about faculty and staff to perform benchmark and peer studies. IR officials may also develop written reports that compare faculty and student perceptions or white paper-type reports that examine current trends in instructional methodology, faculty satisfaction and workload, why students drop out, career plans of graduates, or the confluence between in-class and out-of-class learning. Some IR officials may also serve as campus assessment experts and can be helpful in sharing information on trends in instructional approaches or how faculty and students are managing the combination of technology in the classroom. Since IR professionals are knowledgeable about the campus, its students, faculty and staff, as well as trends in higher education, they are invaluable resources.

IR officials obtain information through two major collection efforts: (a) information retrieved from campus databases and (b) information collected through new efforts including Internet data searches, surveys, and focus groups.

Information Obtained Through Computer Databases

IR officials regularly collect information about students, staff, and the campus that is used for state and federal reports

(e.g., Integrated Postsecondary Educational Data and Statistics (IPEDS), state system reports), accreditation or major survey reports such as *US News & World Report*, as well as for internal management. For example, IR colleagues likely create reports on student graduation and retention rates, transfer patterns into and across the institution, and the percentage of students who change majors. In addition, IR officials collect and report information on campus demographics including the number of students, faculty, and staff; gender; ethnicity; ability measures (e.g., SAT and ACT scores); number of students who live on versus off-campus; student participation in Greek, honors, and other social activities; and the number of students who transfer into or out of the institution. Some IR offices even collect and report on other campus information that may be helpful such as level of faculty participation in and out of the classroom, room utilization, and the percentage of faculty and students who participate in undergraduate research or other campus programs.

Information Obtained Through New Data Collection Efforts

Often times, college and university officials need data that are not already available. When this happens, IR officials may initiate a study or other data collection effort in order to retrieve that needed information. New data may be collected through unique (one-time only) data acquisition from peer institutions but is most often collected through surveys and focus groups.

Data Retrieved from the Internet

The Internet provides access to much information that was previously acquired by mail or telephone request. If a specific question needs to be asked quickly, IR officials may do a search on the Web, or go to a peer institution's home page. Many institutions include a link to their common data set (most often from the IR home page or through the Common Data-set Exchange web site), a robust set of information about the institution and its members. In addition, Internet sites such as the National Center for Educational Statistics Peer Analysis System or WebCaspar enable IR professionals to search quickly for specific higher education information. Within these datasets, there is a wealth of information that first-year program officials may find helpful. For example, the Peer Analysis System offers information on the size and make-up of each institution's student and staff population, tuition and fees, degrees awarded, and financial picture. In addition to standard data retrieved about students, the Internet enables the researcher to review scholarly information published in books, journals, and e-zines. Searches through electronic journals can be a great time-saver when looking for the latest research on college students.

Surveys

A majority of new information collected by IR officials is accomplished through survey administration. Whether the information is gathered through a paper/pencil, web-based, or telephone survey, IR officials often gather information on levels of faculty and student satisfaction, perceived needs or growth of students, opinions on the quality and/or use of campus services, and perceptions about student learning. There are a variety of published instruments that focus specifically on first-year experiences of students. These instruments include those available through the Policy Center on the First Year of College, Your First College Year Survey, The National Survey of Student Engagement, The Student Opinion Survey or Student Needs Survey, The Student Satisfaction Survey, and the Admitted Student Questionnaire.

Focus Groups

Often, IR officials will use focus groups to gather qualitative information that may serve as complimentary information to quantitative surveys. While focus groups are time-consuming and require facilitators who are knowledgeable in this technique, they can provide a wealth of information about students and their perceptions of the campus. For example, a series of focus groups may be held with first-year students during or immediately after they have completed a first-year experience program. Results can yield helpful information on the benefits and challenges of a FYE program as well as suggestions for improvements in the future.

The Fact Book and Other Written Reports

From the variety of information collected in the IR office, a complement of written reports may be available. Some of the information collected in the IR office is compiled in a publication called a *Fact Book*, which contains much helpful information about the numbers of students and staff; enrollment, graduation, and retention patterns; library resources; facilities; and budget information for your campus.

The institution's IR office has a wealth of data that can be helpful to FYE administrators. As faculty and staff begin to evaluate their FYE program, the IR office's web site or IR colleagues can provide information and resources regarding activities to consider for their program.

Web Resources

NCES (National Center for Educational Statistics) Peer Analysis System

<http://nces.ed.gov/ipeds/pas/>

WebCaspar

<http://caspar.nsf.gov/cgi-bin/WebIC.exe?template=nsf/srs/webcasp/start.wi>

Policy Center on the First Year of College

www.brevard.edu/fyc/resources/index.htm



Using EnrollmentSearch to Track First-Year Success

John P. Ward

One-quarter of all first-year students do not return to the same college for their sophomore year (ACT, 2003). Less than half obtain a degree from their first institution (American Council on Education, Center for Policy Analysis, 2003). These statistics reflect the difficulty that a large number of first-year students face in adjusting to college life and its academic demands, leading many to transfer to different institutions or drop out of college altogether.

For years, colleges and universities have grappled with the problem of how to improve first-year to sophomore retention, developing different types of programs and strategies to increase the likelihood that first-year students will return for a second year and, ultimately, graduate. It is important for higher education and community leaders to understand how well their initiatives are succeeding because the impact of low retention can be costly, both to institutions and their students.

As most college administrators know, it is substantially more expensive to recruit new students than retain existing students. In addition, while successful students are likely to recommend their colleges to others and become enthusiastic alumni supporters, the negative word-of-mouth from those who have had unsatisfactory experiences can be very damaging. Students also pay a high price for unsuccessful first years, including the possibility of never completing their education or failing to obtain well-paying and fulfilling jobs.

Unfortunately, it can be difficult for institutions and communities to understand how to focus resources or measure the effectiveness of existing programs if they do not understand the scope of the problem. How many first-year students leave and complete their education elsewhere? Which student groups are most at risk of not returning? How successful have existing first-year intervention and college preparedness programs been in increasing retention rates and student success?

Answering these questions requires access to enrollment information that allows institutions to accurately trace the educational path taken by former students across state lines and over time. Many institutions have turned to EnrollmentSearch, an education research service from the National Student Clearinghouse, to obtain the comprehensive and reliable student enrollment data they need.

What is EnrollmentSearch?

EnrollmentSearch is a subscription-based service that provides access to the Clearinghouse's 60 million student records, the nation's largest database of enrollment and degree data. Through EnrollmentSearch, institutional researchers and college administrators can obtain factual information on the college attendance, persistence, and degree attainments of their prospective, current, and former students.

EnrollmentSearch improves upon traditional methods of data collection, such as student interviews and surveys, which often produce unsatisfactory results. Student interviews, for example, can only reveal students' intention to enroll, not confirm whether or not they did enroll (or where and when). Survey responses are usually low (just 10-30%) and can take a long time to obtain and compile, resulting in incomplete and stale information. Results of large volume EnrollmentSearch inquiries, however, are based on actual enrollment records and can be delivered in as little as one week.

EnrollmentSearch subscribers can query the Clearinghouse's database to answer key questions about first-year students who have left their institution, including:

- Which students dropped out of college and which transferred to another institution?
- Where did transfer-out students go?
- What was their enrollment status at their new institution (e.g., full-time, part-time)?
- Did transfer-out students graduate?
- What degrees and majors did former students pursue?

Uncovering the subsequent educational experiences of drop-outs can help institutions understand how well they or individual programs are preparing students to complete their education, whether at their own or other institutions.

What is in the National Student Clearinghouse Database?

Nearly 2,700 post-secondary institutions, representing 91% of the currently enrolled students in the United States, regularly update the Clearinghouse database with reports on all of their enrolled students, including whether or not each student has graduated. Institutions that participate in the Clearinghouse's free degree verification service, DegreeVerify, (representing 40% of the nation's degree conferrals) also provide detailed degree information (e.g., title, major).

The amount of detailed degree information contained in the Clearinghouse database is growing rapidly as the number of schools participating in DegreeVerify increases. The Clearinghouse expects to provide accessibility to half of all degrees ever issued by the summer of 2004. The Clearinghouse operates EnrollmentSearch in full compliance with the Family Educational Rights and Privacy Act (FERPA), which protects students' privacy rights in their education records.

How Institutions Are Using EnrollmentSearch

One example of how institutions are using EnrollmentSearch to better track first-year student success can be found in a research study conducted by Prince George's Community

College (PGCC) (Boughan, 2003). PGCC, located in Largo, Maryland, turned to EnrollmentSearch to augment data it received from the state, which only covered community college student movement to four-year public schools within Maryland.

Using EnrollmentSearch, PGCC found that its transfer-out rate for the cohort it was studying, 1996 first-time first-year students, was nearly three times as large as when it used the in-state data alone. The following are excerpts from the study:

Augmenting college graduation data with Clearinghouse data made it possible to develop a much more realistic (and impressive) portrayal of the true extent of student success at PGCC. Thirty percent of Cohort 1996 students received an academic award, a transfer, or both an award and transfer within six years of starting their studies at PGCC. The largest category of this successful student group transferred to a senior college or university without first earning a degree. . .

But having comprehensive transfer data is also a great help for conducting the flip side of academic success research: analyzing student dropout. It prevents untracked transfer students from being included in the sub-cohort of students leaving college without apparent academic achievement. This allows for an accurate assessment of the extent of dropout, and opens up the possibility of properly identifying the causes of negative student outflow. . .

The firm identification of a significant “successful dropout” population in PGCC’s student body (18% of the whole cohort) has major implications for college retention programs (Boughan, 2003, p. 3).

Brigham Young University (BYU) also employed EnrollmentSearch as an alternative to the data source it usually used, surveys, for a recent graduation research report. Previously, BYU’s Office of Institutional Assessment and Analysis had mailed out as many as 30,000 surveys over a period of several years to collect data for similar studies, but found the information was often incomplete and the samples they collected too small.

Among the three cohort groups that BYU studied were “Entering Freshmen,” first-year students who began at BYU during the 1992-1996 summer terms or fall semesters. BYU sent the Clearinghouse 30,852 records. The Clearinghouse used this information to search its database and identified the students’ enrollment statuses. With the addition of Clearinghouse data, BYU determined that, on average, 73% of the entering first-year students graduated from BYU and 4% transferred and graduated from another institution. In addition to undergraduate completion rates, Clearinghouse data was useful in discovering that 9% of the 1992 cohort had also completed a graduate degree (The Clearinghouse Record, 2003).¹

How Does EnrollmentSearch Work?

EnrollmentSearch subscribers are provided with secure web access to the Clearinghouse database, including current and historical enrollment records, in order to perform individual student queries. Users can search the database to identify or confirm a specific student’s enrollment at other institutions before, during, and subsequent to the student’s attendance at their own school. Data for large-scale analyses can be obtained by submitting an electronic file of the cohorts being studied (e.g., first-year students who participated in

an intervention program and those who did not) to the Clearinghouse. After searching its nationwide database, the Clearinghouse will return an electronic list of each previously enrolled student to the subscriber.

The EnrollmentSearch file contains records of each former student's enrollment and graduation achievements at postsecondary institutions across the country, including:

- Name of institution
- Type of institution (four-year and above, two-year, less than two-year)
- Attendance dates
- Enrollment status (full-time, half-time, less than half-time, graduated)
- Degrees earned and major courses of study (provided by DegreeVerify participants, representing 40% of degrees awarded in the U.S.)²

A summary report of the enrollment and degree outcomes for the students being studied, including totals by college or university, is provided along with the student-level detail file. Enrollment records going back to the mid- to late-1990s are available for most institutions, allowing users to perform historical studies or develop a longitudinal database to study patterns over time.

Subscribing to EnrollmentSearch

Any post-secondary institution is eligible to participate in EnrollmentSearch, provided it is a participant in the Clearinghouse's student loan verification service. Education agencies and organizations are also eligible to participate to support studies for the improvement of education.

EnrollmentSearch subscribers pay a small annual fee, which covers all inquiries made during a 12-month period. During that time, EnrollmentSearch can be accessed as often as needed. Nearly 1,000 colleges and universities already use EnrollmentSearch to perform institutional research.

Notes

¹To read more about the PGCC and BYU studies as well as view other EnrollmentSearch case studies, visit http://www.studentclearinghouse.org/colleges/esearch/case_studies.htm.

² Institutions must be DegreeVerify participants to access degree records.

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Using Archived Course Records for First-Year Program Assessment

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Archiving historical records of courses is an assessment method that is based on the tenets of action research—promoting educational reform from within by using self-examination and focused inquiry. Such an approach assumes that teaching is a dynamic process that is based on documenting changes and reflecting on how well these changes do or do not accomplish agreed-upon objectives. This is especially important in assessment of first-year courses. First-year or introductory courses are rarely “owned” by a specific professor or group of professors, which makes continuity and fidelity to course content especially important. An analysis of how courses and programs change over time may also help interested researchers track and explain large-scale paradigm shifts within a given discipline. On a practical level, this work is important because it provides a way to understand how the content and processes of education change over time, so that these changes can be evaluated and ultimately influenced by purposeful choice, not unwittingly motivated by influences irrelevant to education itself, such as preferences of the instructor that are unrelated to course objectives. As applied to evaluation of first-year program courses and the students who enroll in them, achieving the right balance of change and continuity in a course may be a significant factor in student retention.

How can a program ensure that the courses offered, especially courses taught to first-year students, maintain fidelity to the content and objectives, while allowing for relevant improvements over time? Academic institutions with a significant interest in accountability for course content may compile archived course records, or “course diaries” for use by faculty and administrators, especially those preparing for the next offering of a course. A course diary documents the content of a course including assignments, texts used, subjects discussed, handouts distributed, and any other pertinent information and supplies a record of overall student performance and expectations. Historical archives of course records also help faculty members guard against “content creep”—the addition of more content with each new offering of the course—and “curriculum drain”—the elimination of content related to the course goals and objectives.

A course diary consists of several sections. The first section should contain the course description, a discussion of how the course relates to the overall curriculum, the number of sections, the number of students, classification of the students (i.e., beginning versus advanced), the texts used, the number of book

chapters addressed, the frequency of tests and other assessments, grading criteria, and final course statistics (e.g., course point averages, percentage averages, grade distribution, and student ratings data). The second section contains everything pointing to that which occurred during the course, including the syllabus, handouts, a list of videos viewed, simulations or experiments conducted, course exams, and other assessments (including scoring rubrics). The final section contains a summary of observations and recommendations by the instructor or students and recommendations for the future as to improvements or general changes. Based on this information, faculty and administrators can evaluate the need for changes and the impact of past changes. Some programs have sought to limit course changes by specifying an outside percentage of the content that they will tolerate to be changed from year to year, to create continuity and limit “content creep” or the converse, “curriculum drain.”

The practice of keeping course diaries requires a minimal time commitment and yields information which can be used to make decisions about how courses should be improved, while highlighting the successful aspects of the course that should not be changed. Course diaries provide documentation for an instructor or inquirer to both analyze change and explicitly plan for and justify needed change. Course diaries may be especially useful for new courses or courses undergoing significant change.

Beyond the specific advantages of course diaries for archiving course content, the use of archival course records represents a larger commitment to inquiry-based teaching. Teaching has too often been identified with informal interactions between teachers and students in a classroom, an art form beyond the scope of critical analysis. While teaching is composed of informal interactions, it can also, like other forms of scholarship, be seen as a process that embodies vision, design, interactions, outcomes, and analysis as it unfolds over time. It should be an activity which prompts critical questions about the scholarship of the course’s content, the effectiveness of the instructional design, the assessment of student learning, and the use of student feedback during the course. Course diaries provide the documentation to assist in this important process of critical analysis of change in the content and processes of education.

First-year programs that have used course diaries report greater control over student outcomes, increased student retention, and more involvement from courses typically relegated to low-priority status. This means that faculty who might otherwise be happy to pass off a first-year seminar to a junior faculty member are more interested in teaching it again. In addition, faculty have a vehicle for reflecting on the effectiveness of the course and their teaching, which empowers them to make necessary changes. Finally, departments use course diaries to limit grade inflation, which can occur as an unintended consequence of reducing or changing curricular content. By maintaining rigor and content of assignments and course content, first-year courses can be an accurate indicator to students of the program they represent and can be a powerful vehicle of attracting and retaining desirable students. In short, course diaries are a wonderful way to promote inquiry-based teaching and to address the challenges of first-year course evaluation.



Freshmen Absence-Based Intervention at The University of Mississippi

Catherine Anderson

Absences, especially in the first-year population, can identify students who may be having some difficulty adjusting to the responsibilities of being a university student. The University of Mississippi developed an initiative called Freshmen Absence-Based Intervention (FABI) to monitor and study the relationship between classroom absences and student success. The program evolved out of research conducted during the 1999-2000 and 2000-2001 academic years that focused on the retention of students at the University, particularly first-year students. Coordinated by the Academic Support Center (ASC) and combining the efforts of ASC staff, graduate student clinical research assistants in the Department of Psychology, faculty and staff in the Department of English, and staff in the Chancellor's Office, the research revealed a direct correlation between student absences and student grade point average (GPA).

Based on data from the study and information obtained from student, faculty, administrator, and staff focus groups, an Absence-Based Intervention Project was introduced and piloted during the 2000-2001 academic year in the Department of English. The program, which initially involved 589 students, focused on reporting classroom absences and implementing subsequent interventions. One goal of the project was to establish a possible relationship between absences and success in college, specifically the correlation between absences and GPA.

Faculty involved in the project reported excessive absences at specified times during the semester via an electronic form designed by Information Technology. Students enrolled in English 101 courses were divided into a control and intervention group. In the intervention group, students with two or more absences received personal contact or "an intervention" via telephone or visit from a graduate student. They were given information about the support services available at the University. For the control group, faculty reported absences, but no intervention was conducted.

Data from this pilot program revealed a direct correlation between absences and success at the University. Further, students who received intervention attained significantly higher GPAs compared to the students who did not receive intervention. Out of the total sample of students in the experiment group, 39% received telephone intervention. In addition, 41% of the students who received telephone intervention had two or more absences after only three weeks of classes.

Course performance indicated that early intervention was crucial to future success. For example, data revealed that more students in the intervention group than in the control group earned midterm and final grades of a "C" or better. Specifically, 87.4% of students in the intervention group obtained a "C" or better at midterm, whereas only 62% of students in the control group attained such grades. Final grades revealed a more drastic difference: 87.4% of the intervention group ended the semester with a "C" or better, whereas only 55% of those in the control group did.

Based on the success of the pilot program, FABI was introduced to the campus community at large in the fall of 2001. With campus implementation, certain particulars of the pilot study were changed so that program implementation could be achieved on a much larger scale. For example, counselors in the University Counseling Center suggested that peer groups might serve as the best vehicle to initiate intervention. As a result, the actual delivery of the intervention was conducted in person by the student's resident hall advisor, as opposed to telephone intervention.

Because the program depended on faculty support and cooperation, faculty had to be brought on board. At the start of the fall semester, faculty received a letter from the Provost's office introducing FABI as a program coordinated by the Academic Support Center that targeted first-year student attendance in lower-division courses. Faculty learned that the program was not designed to evaluate attendance policies; rather, it stressed the importance of class attendance. Excessive absences may also contribute to poor academic performance. Staff in the ASC asked faculty who taught lower-division courses to report on a secure web site first-year students with excessive absences. Instructors determined what was excessive for their courses.

The FABI coordinator downloaded the information provided by faculty once a week beginning the second week of classes and continued the download for eight weeks. The program ended mid-semester since determination of a student's standing in a course was determined at that time by a mid-semester grade. After student names were downloaded and carefully checked for continued class enrollment, resident hall advisors (RHAs) received a list of students via e-mail for one-on-one intervention. The RHA gave the student an informational packet provided by the ASC that stressed the importance of class attendance. RHAs were asked to report back to ASC staff as soon as contact was made. Neither the student nor the RHA knew which instructor reported the absences. They only knew that an instructor reported that the student had missed classes. The RHA contacted a student one time only. Any additional intervention, if necessary, was made directly through ASC staff either through e-mail or by telephone. Similar procedures were carried out during subsequent semesters. In addition to letting students know that the University was indeed paying attention to them, the contact made with students provided advisors in the ASC an opportunity to discuss various support units/services available on campus.

In Fall 2001, approximately 41 instructors of first-year courses reported students with excessive absences, and 245 students were contacted by RHAs concerning excessive absences. Among students receiving a letter grade in a course, 58% of students reported for absences and receiving RHA intervention earned a passing grade, while 42% of students reported for absences and receiving subsequent intervention failed the course.

In Spring 2002, approximately 53 instructors of first-year courses reported students with excessive absences. Approximately 484 students were contacted concerning excessive absences through RHA notification. Among students receiving a letter grade, 70% of students reported for absences and receiving subsequent intervention earned a passing grade, while 30% of students reported for absences and receiving intervention failed the course.

In its first year, FABI demonstrated that students with excessive absences were at risk when it came to class grade point average. Although the pilot study (with control and experimental groups) suggested that such an intervention program does influence attendance and academic performance, there is not yet enough information to determine whether the program directly affects classroom success when practiced campus-wide. One ancillary benefit of the program is that it promoted open discussion of the importance of classroom attendance and University intervention concerning the actions of its first-year students.

Administrators, faculty, and staff at The University of Mississippi have demonstrated through their stated goals and initiatives the commitment to attract, retain, and graduate its students. For an institution striving to enhance its national profile and reputation for high-quality programs and academic excellence, initiatives devoted to helping students admitted under liberal admissions policies to meet higher expectations are crucial. While the first-to-sophomore retention rate at The University of Mississippi is about 76%, a good rate for institutions in our ACT admissions category, the chancellor and provost have set a goal of 80% first-year-to-sophomore retention. We firmly believe the ongoing work of the Freshmen Absence-Based Intervention program will help us attain our goal.

Part 2



Student Voices



The Basics of Focus Groups

Libby V. Morris

Focus group research is a form of qualitative methodology used to gather rich, descriptive data in a small-group format from participants who have agreed to “focus” on a topic of mutual interest. Krueger and Casey (2000), in their comprehensive book on focus groups, characterize a focus group as

... a carefully planned series of discussions designed to obtain perceptions on a defined area of interest in a permissive, non-threatening environment. Each group is conducted with six to eight people by a skilled interviewer. The discussions are relaxed, and often participants enjoy sharing their ideas and perceptions. Group members influence each other by responding to ideas and comments of others. (p. 5)

Focus group methodology provides insight into a topic from the participant’s point of view. Focus group research addresses the “why” of issues. In contrast, quantitative methodology emphasizes collecting numerical data, frequently answering the question of “how many.” In focus groups, participants are encouraged to speak in their own language and to move the topic-at-hand to the most meaningful points for discussion. Emphasis is on understanding of participants’ experiences, interests, attitudes, perspectives, and assumptions.

Focus groups are a valuable methodology for investigating programs, services, problems, and products in higher education. They can be used to generate new ideas, explore an issue in-depth, and understand critical issues in planning and delivery of programs and services (Jacobi, 1991). Although focus groups may be used alone, they are increasingly used in combination with other methodologies such as interviews, observations, or surveys. Methodological triangulation is the use of multiple methods to study a single problem (Denzin & Lincoln, 2000). As a complementary methodology, focus groups may be used to interpret puzzling results from surveys, to guide the development of a questionnaire, or to give voice to quantitative results. In triangulating methodologies, a broader perspective is gained on important research findings and the likelihood of misinterpretation of results or outcomes may be decreased. Increasingly, qualitative researchers use the term “crystallization” instead of triangulation to represent the use of multiple lenses and perspectives in multi-faceted research designs.

Focus groups may be useful for gathering data from specific

populations on a wide variety of topics. Examples of focus groups described in the literature include college-bound high school students giving feedback on recruitment materials (Benson, 1999), transfer students focusing on the transfer process (Davies & Dickman, 1998), African-American students sharing perceptions of being a student on a traditionally white campus (Lee, 1999), and distance education students focusing on the quality of distance education courses (Purnell, Cuskelly, & Danaher, 1996).

Focus Group Cycle: Planning–Conducting–Reporting

Three distinct stages of the research cycle—planning the focus group research, conducting the research, and analyzing and reporting results—are discussed below.

Planning for the Focus Group

Several steps are important to ensure an effective focus group. First the sponsoring office or institution (hereafter called the planner) must be clear about the goals of the research. A great deal of discussion should surround the question “What do we want to know?” It is important to outline the problem, issue, or product to be assessed; to identify the purpose of the focus group; and to generate a list of the broad research questions at the earliest stage of planning (Ponsford & Masters, 1998).

Subsequently, the planner must decide on the composition of the focus group. The composition of the group is guided by the fundamental question “Who can most clearly answer these important research questions?” The planner should identify the ideal participant and the criteria for participation.

Students are most often the participants in college and university focus groups; yet, effective groups may include employers, alumni, staff, or any other stakeholders involved in the process, programs, and outcomes of higher education. Again, the research questions guide the selection of focus group participants. Overall, you want to attract people who will give valuable feedback, for whom the topic is important, and whose responses will not be biased by their assumptions of what you want to hear.

Generally, groups that are homogeneous perform better than heterogeneous groups. Thus, in planning the number of groups and group composition, the potential impact of gender, race, affiliation (e.g., Greeks or non-Greeks), age, experience, and other attributes on the performance of the group should be considered. Research shows that significant differences within a group may render individuals who are unwilling to talk and interact in the group; consequently, it may be necessary to convene more than one group and vary the composition by group. For example, focus groups on library services might convene one or more groups of traditional undergraduate students, other groups of non-traditional, older students, and a third set of distance education students. By increasing the number of focus groups and by varying the composition of each, the depth and variety of findings may be maximized.

The population identified as the subjects for the research make up the “sampling frame”—that population of potential subjects from which the researcher will select focus group participants (Bers, 1990). For example, a study of student attitudes toward service-learning might include in the sampling frame all students who did service-learning in the previous semester. A second cut might include only those who did service-learning in their major. A third cut might include only those who participated in semester-long versus one-time service-learning activities.

Most important in creating the sampling frame is the experience of the potential

participant with the activity under focus. For example, if the focus group will be used to investigate experiences in the first-year seminar, all students who enrolled in the seminar will initially be in the sampling frame (i.e., those students who have experience in the activity). Additional criteria for participation could include (a) only those students who completed the seminar and (b) students with no direct leadership role with the program. Based on these criteria, screening questions might read: "Did you enroll in a first-year seminar?", "Did you complete the seminar?", "Have you been a peer leader in the first-year program?" Given otherwise eligible participants, several groups then might be formed based on gender, residential status, or other attributes as deemed appropriate. Clear criteria for participation is necessary to develop screening questions that include certain participants while excluding others.

Research questions define the sampling frame while specific criteria for participation leads to the creation of screening questions used in selecting specific participants. "Commonality" in the experience is often the most important criteria for participation. This is not to be confused with sameness of opinion or attitude toward the issue under discussion. Clearly, focus group participants who know nothing about the topic under discussion add little to the research.

Following the development of the "screen" (i.e., the questions used to screen the potential participants), planners must solicit participants for the focus group. Screening may take place by telephone or e-mail (or in other creative ways) using a list of potential participants. Participation may be solicited through an announcement to a listserv, a visit to a classroom, or through a posting at places where students gather. I will not discuss the pros and cons of convenience samples versus more systematic sampling here, but I will advance that students who meet the criteria for your study will likely generate useful information for analysis.

Not to be forgotten in the planning phase is making clear arrangements for where and when the group will meet and for communicating this to the invited participants. Reminding participants of the scheduled focus group is paramount, especially the day before the planned activity. Focus groups fail if no one comes! Also to be decided in advance is whether incentives will be used to encourage participation in the focus group. A small incentive may increase the inclination to participate. In the commercial use of focus groups, participants are paid; this also happens in higher education. With students, the more likely scenario is food at the event or coupons for later use.

Another important planning issue is the role of the moderator in planning, conducting, and evaluating the focus group activity. Moderators may come in at any stage, but this decision needs to be made early in the planning cycle. Although much is written about the role of moderators and the how-to of conducting the group, it is most important that the moderator be a good listener and discussion leader, not identified with any particular outcome, and have no direct authority over the participants (e.g., program director or instructor). The moderator should be seen by the participants as an interested, but neutral party to the outcomes of this study.

Conducting the Focus Group

On the day the focus group will meet, it is important to arrive early, organize the room, and set-up the audio or videotaping equipment (participants must grant their permission to be audio or video-taped). When the participants arrive, someone should greet them and make each feel comfortable and valuable to the process. The participants should be screened again at this point to be certain they meet the criteria for participation. Extra participants

who were invited to ensure a sufficient group size should be thanked, given the promised incentive (e.g., food, movie coupons), and dismissed from participation. During the group, a logistics person is needed to handle the equipment, take notes, and if agreeable with the moderator, to interject a question for clarification or other purposes. This person may be the same as the greeter. Finally, the moderator will begin and end the group session, which on average takes 90 minutes or less.

The moderator should be skilled at using various types of questions, nonverbal behaviors, and non-judgmental cues to elicit responses. The moderator must also be skilled at listening, guiding, and prompting. The focus group responses will be no better than the skill of the moderator in guiding the discussion and improvising as the group dynamics dictate. Moderators should prepare a set of questions prior to the session in consultation with the planners for use in guiding, but not controlling, the discussion. The moderator's skill at eliciting participation, honest opinions, and managing group process will greatly affect the quality of the research outcomes (Greenbaum, 1998).

Deciding on the number of focus groups is always a challenge. During the course of the research, it may be necessary to plan a third or fourth group. Or, it may be necessary to cancel a group. The analysis of the data throughout the process will yield clues as to when to add groups and when to wrap up the process. When you begin to hear the same themes and get the same outcomes, you have saturated the opinions of the target population, and data collection may end.

Analyzing and Reporting the Results of the Focus Group

Focus group reports may vary in length, style, and comprehensiveness based on the needs of the planners. For example, in raw data summaries, the transcript of the session is supplied to the sponsors with all questions and verbatim comments. In descriptive reports, themes are identified and supported by selected quotes. In interpretive reports, a summary of the discussion along with illustrative quotes is followed by interpretation of the meaning of the dialogue, questions, and themes. If the moderator is not writing the report, he or she may be asked to develop a statement of moderator observations by topics discussed.

A standard report generally has the following sections. The report opens with the purpose of the study: research questions, specific objectives of the research, logistics, and sponsors and planners of the research. Next, the group composition is described (preserving anonymity for participants). Included is an overview of the selection criteria, the screening guide and process, number of participants, and their general characteristics. Another section describes the environment in which the focus group was conducted; the way participants were assembled and welcomed; the incentives, if any, and their use.

The results of the focus group constitute the major section of the report. What did the focus groups reveal about the research questions? What themes and ideas emerged? What important, and unexpected, issues emerged? Were there similarities or differences of opinions and perceptions? This section may also include paraphrased or verbatim participant comments.

Following the summary, a synopsis of any problems that occurred should be noted. Were there extremely biased members? Did some fail to talk? Moderation problems? Research is never pure and without problems, and the limitations should be addressed in the report. Depending on the nature of the report, it may end with conclusions. In all cases, the appendices should include screening instruments, moderator guide, and any materials used as prompts or props.

Conclusion

Focus groups allow for spontaneity, synergism, and feelings of security (i.e., it is okay to advance an unpopular response). Further, focus group responses often “snowball,” building one on the other, something lost in individual interviews (Hess, 1968). In the focus group, every participant does not have to answer each question as in individual interviews, and the group process stimulates group discussion and idea generation, often lost in dyads. Focus groups seemingly generate excitement among the participants and yield immediate information for planners.

In summary, focus group research may be a valuable tool for exploring the first-year experience of students. The first attempt does not have to be perfect. Believing that we “learn by doing” is a reason to give focus groups a try, and if at first you don’t succeed, that’s okay, try again!

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Looking at the First-Year Experience Qualitatively and Longitudinally

Marcia J. Belcheir

Have you ever conducted a quantitative study—developing instruments, gathering data, and tracking students longitudinally—only to discover at the end that you still felt you did not have a handle on the issue? I have. When I first came to Boise State University, retention was the biggest issue on campus and, therefore, one I tackled early on. After an extensive quantitative study, however, I still felt that I lacked an understanding of the new students' experience at the university. *What did we want to know?*

The quantitative study had indicated that re-enrollment was best predicted by first-term GPA. First-term GPA was best predicted by admission index scores and the numerous conversations held with faculty during the first semester. In addition, students who reported more occasions of feeling lost and alone on campus during their first semester had lower GPAs, and students who used more services were more likely to remain enrolled. Taken as a whole, these findings indicated that preparation for college and engagement in the campus resulted in higher GPAs and retention. Still, an understanding of what was going on during that first semester eluded me.

Clearly, another kind of study was needed, one that answered different sorts of questions. These questions included: What were students' first impressions as they arrived on campus? How did they negotiate the admissions, advising, registration, and financial aid processes? What were their classroom experiences their first semester? Were these experiences what they expected? What was meant by "conversations with faculty," and who was having them? Finally, of course, all these questions led to the larger question of how these experiences related to student success (as measured by GPA) and retention. These larger and more nebulous questions could not be easily answered by giving students structured survey instruments. Gaining a "student's eye view" could only be accomplished through another form of data-gathering, one that was more qualitative in nature.

How Did We Conduct the Study?

Data for the study were acquired through three methods. First, the students were interviewed weekly during the fall semester. The basis for the interviews was a series of questions developed prior to the fall semester with input from both academic and student affairs offices. Each week, students were

asked a different series of questions. These questions started with their arrival on campus and ended with a reflection on their first semester. Second, students kept journals where they recorded both positive and negative experiences of all aspects of their lives. Finally, a group meeting was held at the close of the first semester during which students met each other and the research team face-to-face for the first time. This in-depth, long-term relationship with students allowed for gathering data not generally available through traditional survey methods.

The 25 students selected for the study were deliberately chosen to represent a cross-section of Boise State first-year students. Selection criteria included gender, ethnicity, age, and whether or not students had chosen a major. In return for their cooperation, we offered each student a \$50.00 gift certificate from the bookstore, payable when they turned in their journals at the end of the semester, and one free academic credit. An Excel spreadsheet contained additional information on demographic variables, entering test scores, high school GPA, major, financial aid, living arrangements, credits taken, and jobs. Students were assigned a research number and name to be used throughout the study to help preserve anonymity.

Conducting a qualitative study is a labor-intensive process. A half-time staff person and work-study student provided support for managing the study, especially for weekly calls to students. With student permission, phone interviews were recorded so that I could conduct spot-checks and retrieve verbatim comments. The data manager recorded the “gist” of the interview responses, including direct quotes for particularly applicable comments. While verbatim transcripts of the interviews would have been ideal, we simply did not have the resources to do it.

The journals provided a more intimate peek into students’ lives. Some students wrote in them almost daily, while others wrote weekly. Some wrote only sporadically or not at all despite frequent prompting during weekly interview sessions. Where possible, all personal identifiers were removed from the journals prior to reading.

The end-of-semester meeting was the least productive part of the study. Despite offerings of pizza, only about half of the students showed up, and those who did were not very interested in talking. Perhaps the timing of the meeting was a factor—finals were looming. Also, they may have been “talked out.” In retrospect, a different process may have produced better results.

How Did We Analyze the Data?

There is nothing cut and dried about a qualitative data analysis. Approaches depend upon the philosophy of the researcher, the questions posed (if any), and the data. For our study, early questions about arrival and classroom experiences were answered by reading responses for themes and patterns, forming possible conclusions, and then re-reading to verify or modify those conclusions.

For the larger question of how background and experiences related to retention, the data had to be studied in yet another way. First, a sketch of each student was developed. Students also were identified as successful or not successful and patterns were sought within each sub-group. The “successful” group consisted of 13 students who returned for both spring and fall terms and who maintained GPAs above 2.0 for both semesters of their first year. The “unsuccessful” group consisted of seven students who did not re-enroll and who also had GPAs below 2.0 for at least one semester. A third group of four students was labeled “at risk” because, despite the fact that they continued to enroll, during either their fall or spring semester they had a GPA below 2.0 indicating they might be in academic

jeopardy. A final group consisted of only one student, who had a good GPA both semesters but still did not return one year later.

What Did We Find?

Students were somewhat surprised to find large lecture hall classes. Though they viewed them as a necessary part of college life, they preferred the smaller class sizes where they could participate in discussions and had more access to the professor. A majority of students in the study did not have a good idea of how they were doing in their classes until semester grades were posted. Most wished for more feedback about their performance earlier in the semester. These findings had definite implications for scheduling and faculty development on our campus.

We found that students who were successful represented the spectrum of the student body. For older successful students, a key to success seemed to be a supportive home environment. For younger successful students, getting involved with campus activities, seeing the value of an education, and enjoying the pursuit of learning helped. Family support for the younger group was less important than for the non-traditional students. In fact, extreme family support could sometimes signal that the parent, not the student, was committed to college.

Students who were not successful typically fell into two groups. One group consisted of women who had children and were trying to go to school with little support from their households. The other group consisted of 18-year-olds who generally appeared developmentally unprepared for college.

Being able to make finer distinctions among “types” of students was a benefit of the qualitative approach. For instance, in the qualitative study we found that first-semester GPA was a key variable in predicting further enrollment since students who received low grades were much less likely to return. Through the qualitative study, however, we noted that some students stopped attending classes prior to the end of the semester and therefore received poor grades, indicating that GPA was an outcome as much as it was a predictor. A similar finding occurred for faculty contact. In the quantitative study, it appeared that more faculty contact predicted higher GPAs. We discovered, however, that most of the students talking to faculty were those who were already doing well. Those who were performing poorly typically were not talking to their professors, *because they had bad grades and felt they would be viewed as “stupid.”*

A qualitative study is specific to a campus’s environment and students. Thus, what we discovered might not be true for other campuses. For these and other reasons, I highly recommend that campuses undertake their own qualitative research studies of first-year experiences. The results will undoubtedly be illuminating, providing institutions with a study based on the uniqueness of their own student bodies and campus environments.

Author’s Note

For those interested in further details of the study, please visit our web site, <http://www2.boisestate.edu/iassess/>. Click on “Reports” then view reports 97-04, *Lasting First Impressions: A Qualitative Study of Freshman Arrival on Campus*, 97-06, *It’s Academic: A Qualitative Study of Student Classroom Experiences*; and 98-05, *Who Stays? Who Leaves? Results from a Qualitative Freshman Study*.



Using “Think Alouds” to Evaluate Deep Understanding

Lendol Calder
& Sarah-Eva Carlson

“Deep understanding” is what teachers want for students. But how do we know when it has been achieved? Are certain assessments better than others at shedding light on what students really know and understand? Few would defend the method used by a deaf, English public schools inspector who, after listening to student recitations, would rise and declare, “I have not been able to hear anything you have said, but I perceive by the intelligent look on your faces that you have fully mastered the text.” This essay describes the authors’ experience with ineffective student learning assessments and their subsequent employment of an effective technique called the *think-aloud method*.

Experienced teachers know that popular assessment methods conceal as much as they reveal. Papers and exams, for example, offer little help for figuring out why a student has recorded a wrong answer or struggled unsuccessfully with an assignment. Conventional assessments also run into problems of validity. Because they rely on students’ ability to articulate themselves in formal language, papers and exams tend to conflate *understanding* with *fluency*. But sometimes, especially with first-year students, the tongue-tied harbor deep understandings even though they perform poorly. The reverse is true, as well; sometimes articulate students are able to say more than they really understand. “The thorniest problem” of assessment, according to Wiggins and McTighe (1998), is differentiating between the quality of an insight and the quality of how the insight is expressed.

A helpful tool for grappling with this problem is think-aloud protocol assessment. Think alouds are a research tool originally developed by cognitive psychologists for the purpose of studying how people solve problems. The basic idea behind a think aloud is that if a subject can be trained to verbalize his/her thoughts while completing a defined task, then the introspections can be recorded and analyzed by researchers to determine what cognitive processes were employed to deal with the problem. In fields such as reading comprehension, composition, mathematics, chemistry, and history, think alouds have been used to identify what constitutes “expert knowledge” as compared to the thinking processes of non experts. For first-year assessors, think alouds offer a promising method of uncovering what conventional assessment methods often miss: hidden levels of student insight and/or misunderstanding.

We first used think alouds when assessing a new design for a first-year history course. The new design shifted emphasis

away from tidy summaries of historical facts and knowledge toward the central questions, methods, assumptions, skills, and attitudes that characterize history as a discipline. Students completed eight identical assignments in the course, and student learning was measured by comparing the students' first and last papers. The results were disheartening. It was the rare student who showed steady progress from week to week, and few of the final papers were superior to the first ones. On the basis of this evidence, it seemed the new course was a failure.

But course evaluations and self-reports suggested otherwise. Here, students insisted they had learned a great deal, a claim that certainly squared nicely with the intelligent looks on their faces at the end of the term. Puzzled by the conflicting evidence, we turned to think alouds for help.

Our procedure was as follows. From 60 students in the course, 12 were selected to participate in a think-aloud study, representing a cross-section of students in terms of gender, grade point average, and major/nonmajors. For their participation, subjects were paid \$10 an hour. In week one of the course, we sat down with each student in a room equipped with a tape recorder. After training subjects how to verbalize their thoughts, we presented them with documents concerning the Battle of the Little Bighorn, a subject most knew little about. Then we asked our subjects to think aloud while "making sense" of the documents. This was essentially the same task they would perform eight times over the length of the course, though in this case their thoughts would not be filtered by the task of composing an essay. With the tape recorder running, subjects read through the documents aloud, verbalizing any and all thoughts that occurred to them. When subjects fell silent, we would prompt them to think aloud, or to elaborate on their thoughts, as they attempted to make sense of the historical evidence.

Our think-aloud sessions lasted anywhere from 40 to 90 minutes. After all 12 sessions were completed, the tape recordings were transcribed for analysis. Analysis took the form of coding each discrete verbalization in the transcript according to the type of thinking it exemplified. We were able to identify 15 different types of thinking processes displayed in the think alouds, from the uncategorizable ("it sure is hot in here") to comprehension monitoring ("I don't understand that part") to the six types of historical thinking we were particularly looking for, such as *sourcing a document* ("I can't trust Whittaker; he wasn't there."), *asking a historical question* ("I wonder what caused this battle."), or *recognizing limits to knowledge* ("I need to see more evidence than this."). After coding each think aloud independently, we used a common rubric to rate each subject's proficiency on the six thinking skills taught in the course. For this, we used a five-point Likert scale where "1" indicated the undeveloped ability of an average high school senior and "5" indicated a sophistication comparable to that of a professional historian. We then compared our coded transcripts until reaching consensus on how to rate the students' abilities in the six key areas. To prevent our bias as course designers from influencing the results, we contracted with an outside analyst to help us code the transcripts and rate students' abilities.

At the end of the term, the 12 subjects completed a second think aloud. When these sessions had been transcribed and coded and the subjects' abilities rated, we compared the first and second think alouds to determine whether students had made gains in their understanding of what it means to "think historically."

The think alouds opened a fascinating window into the thought patterns of students before and after the course. Overall, the think alouds revealed cognitive enhancements that were not as dramatic as claimed in student self-reports, but much greater than indicated by using comparisons of early and late papers.

Other surprises were equally interesting. Under-performing students struggled less with historical thinking than with reading itself. Moreover, in the second set of think alouds, we noted that some of the best insights and meaning making came from students who, in the grade book, were steady "C" performers. For them, deep understandings seemed to evaporate when they tried to wrestle their thoughts to paper. This told us that we had work to do if we wanted to distinguish between assessing *understanding* and assessing *students' ability to communicate their understanding*. The real roadblocks to learning historical thinking, we discovered, are poor reading comprehension and prose writing.

On our campus, the potential of think-aloud protocols has not been lost on other faculty. For example, library staff are using think alouds to assess how first-year students find information when they go to the library. Information gained from the study will be used to help library staff identify misconceptions and teach against common missteps students make when doing research.

Think alouds are not perfect assessment instruments. The advantage of think alouds is that they give us insight into our students' struggle to formulate problem-solving strategies, employ skills, and develop insights. Papers, exams, and ex post facto commentary by students are helpful in their own ways. But they make the process of understanding seem more orderly than it is, covering up the confusion, the disorientation, the mimicry of correct responses, and the lucky guesses—all of which are good to know about when assessing teaching and learning.

As the emphasis in first-year pedagogy switches from teaching to learning, from "what am I going to do today" to "what are *they* going to do today," the days of using only papers and exams to assess student learning are long gone. Teachers need more procedures capable of opening up the hidden world of learning. Think alouds can be helpful in this way, especially in courses emphasizing the development of cognitive skills.

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The Promise Audit: Who's Promising What to Students?

*Marian Allen Claffey
& Ned Scott Laff*

A first-year student begins her end-of-year advising appointment by announcing, "I can't take it any longer. This school has broken every single promise it made to me this year. I'm transferring." The student itemizes a long list of grievances—a litany of broken promises—ranging from canceled courses to too many part-time instructors to residence hall problems. Their cumulative effect leaves the student feeling betrayed, disillusioned, and with the belief that departure is the only solution to her problem.

If we are lucky, students, like the one above, do come in to talk to us before departing, but more often than not, they simply "disappear" from our campuses, leaving with the sense that they have not been listened to or taken seriously. This sense of "broken promises" is quite real for many students and a phenomenon that can be empirically investigated as part of a first-year assessment effort.

Organizational Justice and the Psychological Contract

Over the last 40 years, research in organizational justice has yielded an array of theories that address the social construction of fairness in organizational settings (Greenberg & Cropanzano, 2001). One particularly useful fairness theory is the psychological contract (Rousseau, 1995). A psychological contract is the set of beliefs an individual holds regarding reciprocal obligations with another party. In other words, a psychological contract is the by-product of a voluntary exchange relationship and represents an individual's unique perception of promises made and agreed to. There is also a strong affective dimension to psychological contracts. Thus, promises are more than a claim of future intent: Promises are expressions of hope. Promises made and accepted offer good faith in exchange for trust.

A Promise Audit

Do students perceive certain programs or services at your institution as "promise breakers"? Do students perceive published policies as being at odds with institutional practice? Does campus culture communicate messages inconsistent with your mission to serve students? Are students tacitly made promises that college resources will not be able to fulfill? An assessment of student psychological contracts on campus—what we call a "promise audit"—requires a willingness to (a) listen authentically to students in order to hear the language of (un)fairness and (in)

justice embedded in their stories and (b) consider campus practices first and foremost from the student's perspective. We believe that assessing student psychological contracts challenges us to consider the implications of student perceptions of fairness for our campuses.

Two critical—and related—assumptions underlie this framework for auditing promises. The first assumption is that student voices convey legitimacy of experience. Student voices communicate to administrators, faculty, and staff the collegiate experience as students have constructed and made meaning of it. Administrators' claims to "know better" or to know "what's really happening" on campus undermine the value of what students have to tell us, thus undermining the relationship with students. More important, students know when their voices have not been heard.

The privileged position represented by the administrative point of view frames the second assumption underlying the promise audit: We must acknowledge that the experience of reality from our "insider" perspective is not a reality shared by students. This is not to suggest that the faculty/administrative voice has no legitimacy, but when it is the *only* or *primary* voice considered, it limits our understanding of student experience and compromises our ability to create collaborative learning relationships (which may be critical to developing and retaining communities of learners).

Enacting the key assumptions of a promise audit requires a willingness to hold up the "fairness mirror" to our institutional practices, which is rarely a comfortable process. Thus, a key principle in the conduct of the promise audit is an acknowledgment that "it is the *perception* of mutuality, not mutuality in fact, that constitutes a psychological contract" (Rousseau & Tijoriwala, 1998, p. 680). We recognize that students' interpretation of reality based on their interactions with our campuses are just as valid—as "real"—as our administrative, functional justifications of campus reality.

Listening to Student Voices

Given the subjective nature of the phenomenon we are describing, self-reported measures become the primary source of data regarding the nature of campus psychological contracts (Rousseau & Tijoriwala, 1998). Structured focus groups with new students are one way to begin auditing promises, paying special attention to the language of fairness that students use. Other content-oriented assessments could occur during academic advising sessions, residence hall/floor meetings, exit interviews, and informal conversations with students. In addition to explicit references that students make to promises made and broken, educators must pay attention to other expressions, such as

- "I did what I was told to do, and things didn't happen as I was told they would."
- "I was told what to expect, and what I found was something different."
- "Things changed, and I wasn't told what the changes meant."
- "I was disappointed/hurt/angry because I was told...."
- "Why bother with teaching evaluations, nobody takes them seriously...."
- "I felt betrayed."
- "(A campus contract maker) said that X would happen, but instead Y happened."

A promise audit forces us to legitimate student voices. But promise audits also take us one step further: They force us to take a hard, self-reflective look at our campuses from the contextual perspective of the lived experience of students.

Promise Makers/Contract Makers

From the onset, the promise audit reveals the complexity of how students experience our campuses. “Contract makers” abound, often making it difficult to construct an integrated, coherent message for students. Do you know who—or what—are the principal contract makers on your campus? What promises are they making? Are these promises that the organization can realistically keep? Contract makers in postsecondary settings might include (but are certainly not limited to):

- College catalogs and brochures
- Schedules of classes
- Course syllabi
- Admissions representatives
- Student tour guides
- Orientation leaders
- Current students and alumni
- Faculty
- Staff
- Deans and department chairs
- Observable campus practices and procedures

Shared Perception

As a simple audit exercise, a campus might start with focus groups of promise/contract makers (those people on campus whom students interact with for information, advice, support, and teaching) and students willing to honestly participate in a promise audit by frankly talking about their campus experiences. Student volunteers might first explicate their perceptions of problematic campus issues followed by similar explication by the promise/contract makers. This process would provide an opportunity to compare similarities and differences in perception and provide practice at “hearing” what students have to say. Focus groups might consider:

- Teaching quality
- Fairness in classroom practices
- Course availability (scheduling)
- Reasonable and equitable policies and practices
- Ease of access to classes (undue policy restrictions)
- Residence hall policies
- Ease of access to support services
- Quality of support services
- Representations of campus practices vs. the reality of campus practices

University Justice

Psychological contracts are complex: They are a function of individual predisposition and cognition, social context, and organizational distinctiveness. “What’s fair is fair” may be a truism, but what is fair on one campus may not be what is fair on another. Indeed, what

is fair on one part of campus may not be fair on another part of campus. Our willingness to assess perceptions of fairness contributes to our understanding of the student experience and speaks volumes about our orientation toward the ethical treatment of our students.

An article on the “just university” in *The Chronicle of Higher Education*, Katz (2002) addresses a modern tendency of the academy to all too willingly separate knowledge from morality, to simply describe what is rather than suggest what should be. Yet, we believe that those who study fairness issues in higher education have a responsibility to integrate description *and* prescription. The discovery that students perceive unfairness or injustices on our campus should be more than just an interesting academic exercise—it should be a moral framework for self-reflection and, when needed, for organizational change.

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A Case Study on Developing Faculty Buy-In for Assessment

Lissa Yogan

Assessment of a first-year general education course at a small, private university was initiated in response to an external requirement. In 1996, an external grant provided funding to develop a year-long, required, interdisciplinary, 10-credit, “core” course. The grant-maker required serious attention to assessment. In addition to the familiar summative assessment, which evaluates successes and failures of a fully implemented program, the grant-maker asked the university to engage in formative assessment. Qualitative methods proved critical in accomplishing this within the prevalent institutional culture.

This narrative briefly discusses the assessment climate on campus, describes how core faculty became proponents of assessment, explains how the core survey came to be housed in a larger student satisfaction survey, and outlines key elements of a successful assessment project.

Assessment Climate on Campus

Since instructional faculty at this campus often dismissed assessment as a dubious bureaucratic exercise, instituting meaningful formative assessment meant a change in culture. Assessment itself was not new, but formative assessment designed for faculty use was. Faculty members typically cited their overwhelming teaching loads or a belief that “numbers” could not really measure the processes of teaching and learning as reasons not to become involved in classroom assessment.

The reasons faculty give for not doing formal, quantitative assessments are typical, differing little from campus to campus. Schilling and Schilling (1998, p. 17 - 22) report that all concerns can be reduced to a list of 12:

- We already do it.
- The data will be misused.
- I’m afraid of change.
- The criteria are unclear.
- Assessment violates my academic freedom.
- Assessment is inconsistent with academic values.
- Faculty lack knowledge of assessment.
- I have no confidence of assessment.
- Too often, what is tested becomes what is valued.
- We don’t need more bureaucracy.
- My plate is too full.

- Nobody told me about the shift from teachers and teaching to students and learning.

The faculty at this institution voiced almost all of these reasons, yet the team did not let these typical concerns deter their efforts.

Key Step #1: Creating an Assessment Team

A team of several core faculty, the university's institutional researcher, and two faculty consultants took up the challenge of developing a formative core assessment program. Senior, tenured faculty and more recently hired faculty sat together on the Core Steering Committee and made final decisions on texts and syllabi for this important new University program. The research team was composed of an independent higher education evaluator who taught part-time in the core program, a sociology professor who formerly worked as a survey research consultant, and the University's institutional researcher.

The survey questions related to the core were housed in a larger instrument that attempted to capture the essence of students' first-year experience. However, since the core program had provided the impetus for the assessment project, the research team agreed that core faculty would be the primary audience for assessment results and be the first to receive reports. Secondary audiences would be the university retention committee, the Provost's Office, the assessment committee, the teaching and learning center, the chapel council, the honor's college, and the Athletics Department.

Key Step #2: Using Qualitative Methods to Overcome Faculty Resistance

The assessment team's first step was discovering student and faculty impressions of the former first-year required courses, as well as hopes and fears for the new core course and experience. Deliberately, this process was not rushed. Over the course of eight months, qualitative methods were employed to gather the needed information. The research team felt strongly that it was best to begin by listening. They did this at times convenient to the respondents. No faculty member had to give up designated work time to talk with the researchers. Students were invited to talk at times that did not conflict with class schedules.

Some of the student comments took on special meanings and were repeated by the faculty or repeatedly used to define specific concepts. Indeed the presentation of the qualitative student data gave rise to faculty discussion on assessment that was enthusiastic and enjoyable.

In this way, the voices of articulate students helped ease the faculty into the assessment process. As the faculty members voiced their hopes and fears about this new program in small groups and in a larger group discussion, they unwittingly began to shape the final questionnaire and join the research team.

Core faculty posed numerous questions, and by fall 1999, agreed that a written survey instrument would provide more representative information than interviews. The culture surrounding assessment was beginning to change. The faculty had moved from negative attitudes toward research to a position of desiring more broad-based assessment tools.

Key Step #3: Creating the Research Instrument

The decision was made to develop a survey in-house. The goals of the survey were two fold: (a) to assess the core program and (b) to assess student satisfaction with their first-year experience.

Because the survey was designed to serve two primary groups—core faculty and members of the Retention Committee—care was taken to make sure both groups saw and were able to comment on consecutive drafts of the survey. This process was time consuming. The creation of the instrument took four months and mandated numerous revisions.

The member of the research team charged with survey design met with a diverse group of people. They included members of residence life, representatives of the campus chapel, a student-athlete advisor, an engineering professor, the director of multicultural affairs, the dean of students, an employee who worked in financial aid, the head of the academic help program, and students in a spring semester general education class. The involvement of so many groups undoubtedly contributed to the survey's length but also established a link among faculty and staff and students.

Each group represented by a staff or faculty member were at first somewhat territorial, concerned almost solely with "their section." Thus an early draft of the questionnaire missed one of the most talked-about components of first-year college life: food! Students in the general education class quickly pointed out this oversight, underscoring the need to include students in all phases of the project.

Key Step #4: Delivering the Results and Re-involving Faculty

Nearly 600 students (90% response rate) completed a questionnaire that asked 150 questions about their first-year experience. Focus groups involving 33 first-year students were held in late spring, using questions similar to those of the previous year's interviews. The assessment team also provided faculty with grade distributions by section, gender, and race and worked on a course evaluation with questions about specific texts and class exercises.

Because some faculty were not receptive to quantitative measurements of teaching and learning and others were ambivalent about "numbers-oriented" assessment, much care was taken to deliver the results of the survey and other assessment efforts in a way that faculty could "own" and use. The initial results were given during the end-of-the-year faculty workshop. This is a two-day workshop at which core faculty gather to talk about the experience of the core program and plan for the following year's changes.

The presentation was interactive and given without a lot of statistical language. Care was taken not to provide too much information too quickly. No statistical models were presented. Lively discussions took place over questions and results. Faculty ultimately focused in on two or three items that *they* were interested in working on for the following year. They did this in faculty cohort groups.

In addition to the large group presentation, each instructor was given a printout of his or her results and how those results compared to the overall group means. Individual faculty members were allowed to use these results however they saw fit. The freedom to respond in a variety of ways allowed assessment to be seen as less heavy-handed and more accommodating to faculty needs, time constraints, level of knowledge about measurement and numbers, and individual philosophies regarding the nature of teaching and learning.

At the end of the presentation, the faculty asked questions and provided thoughtful suggestions for analytical methods. A core faculty member from psychology, with a background in structural equation modeling using survey data, joined the assessment team to help with analysis. He and more than 30 core faculty from various departments are now stakeholders in the assessment process.

Conclusions

Key elements of this project's success in developing faculty as stakeholders in assessment include: (a) creating an assessment team consisting of staff and faculty, across disciplines, and from insider and outsider perspectives; (b) using qualitative methods to develop trust and further collaboration by listening to and respecting student and faculty viewpoints; (c) following the natural pace and rhythm of faculty (meetings after graduation, for example); (d) addressing faculty concerns and building consensus behind the scenes; and (e) once they become stakeholders, letting faculty adapt an assessment program to meet their needs.

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The First-Year Prompts Project: A Qualitative Research Study Revisited

*Elizabeth Hodges &
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"The particular is always more than a match for the universal; the universal always has to accommodate itself to the particular." Goethe

Project Goals and Design

The Freshman Year Experience group at Virginia Commonwealth University (VCU) in an effort to delve into the specifics of first-year students' fall semester, undertook a large-scale qualitative project—a case study of the entering first-year class. VCU's first-year attrition rate was holding steady at 17%. Our challenge, issued by the University Retention Committee, was to find strategies for lowering that percentage. Our response was to interview more than 700 first-year students about various facets of their academic and non-academic lives at VCU. Each week, students in required first-year writing courses were given 10 minutes to respond to an impromptu, open-ended question eliciting information about a particular aspect of the first-semester experience. The responses were spontaneous and often unpredictable. The project was based on a sound qualitative and ethnographic principle: We let our informants direct our gaze and avoided foregone conclusions.

All but two of the prompts asked for anonymous responses. All prompts asked students to check off demographic information: gender, ethnicity, place of residence, school, major, and composition course section. An average of 700 responses came in each week, generating approximately 10,000 responses overall. Though students' responses sometimes included queries about our sincerity (e.g., "Are you reading this?"), their responses were almost unanimously thoughtful and frank.

Data Analysis

Twenty-eight readers—faculty, staff, and administrators with a range of concerns and interests—analyzed the data. Teams of three to five readers, formed on the basis of institutional area and interest, read each prompt. Some readers with a range of interests read several sets of prompts. They coded data according to recurring patterns, which the team identified and agreed on through a preliminary reading. Readers also noted important anomalies to the patterns.

When teams finished reading, they drew summative conclusions as to what each set of responses was telling them. These conclusions led to recommendations for institutional changes, many of which were enacted. The reading was time-consuming and the coding tedious, but readers unanimously agreed that the findings were worth the work.

Working with such a large, rich data set is obviously quite messy. But most of us who read vividly remember comments that resonated with us, and most would agree that the project enhanced our ability to picture more specifically the world our first-year students enter. And while we were most intrigued by the detail and voices of the prompts, we assessed the data quantitatively, treating coded patterns numerically and breaking responses to each prompt down according to the demographic data collected. This quantitative breakdown has allowed us to examine the data from a range of perspectives and to support our many claims about general patterns readers drew from the data.

For example, students unanimously praised the diversity at VCU and the opportunities to engage in diverse experiences, whether they defined this as ethnicity, academic discipline, or life style. Simultaneously, students made clear that ethnic relations were often misleadingly cordial in the classroom. Once students left the classroom, separation by ethnicity was the norm.

Another discovery was that students' use of VCU's many, well-developed support services was quite low. Whether out of ignorance or choice, students were persisting in meeting the emotional, psychological, and health challenges of their first college year alone or with friends, sometimes successfully and sometimes not.

Now we might have reached the same statistical conclusions through a well-constructed survey, but we would have missed some of the most important and influential experiences in our students' lives. We were disarmed by the nature, frequency, and sometimes seriousness of the non-academic challenges students face. We would not have been able to name the challenges had we simply collected bubble-test response data. We were able to identify not only what services students least use but also why students did not use them. And in some cases, responses to a bubble test might have been misleading. For example, in the case of ethnic relations, a bubble-test might well have indicated that relations were fine. We would not have learned that while relations were generally cordial, students were aware, often concerned, that the comfort and communication across ethnicities in the classroom did not reflect the community beyond the classroom.

One very major discovery for us was the strength of feeling students had about their large classes. Whatever the prompt, some reference to frustration with large classes seemed to emerge. In a follow-up interview a year later, one student captured the main concern of many comments from the original study: "Teaching takes place in large classes; learning doesn't." Because of students' persistent references, the large class came into focus for the university as a site with issues that needed addressing.

Why Carry Out This Kind of Research?

Colleges and universities need to hear a full range of student voices. This type of research allows every respondent to have his or her own voice and creates a broader base of both input and output (as readers spread the word). Because of the power of student voices, this is research that engages. It is also ultimately replicable research: Virtually everyone can tap first-year composition programs, and each campus can create its own demographic categories for identifying how its important subpopulations differ from the whole.

Understanding generational shifts between those who design programs and services and those who use them is important, perhaps crucial, if programs and services are to

meet best the needs of those they serve. Professors and administrators are perpetually graying and giving way to new generations coming on board. Students' habits of learning, their concerns, and cultural visions are constantly changing. For all of us, The Prompts Project shook up some of our assumptions and gave us new eyes. We were able to begin defining agendas for change that were important and relevant to our students. Our students are never, in any way, a generic population.

The First-Year Prompts Project Questions, Fall Semester 1990

- Week 1* New Student Orientation was last week. If you attended, what about the orientation was beneficial for you and what was not? If you did not attend, why not? If you are no longer in your first year, but attended orientation in the past, we'd like to hear what you remember of it as well.
- Week 2* You're here at VCU. You've worked hard to get here. Write for 10 minutes about your hopes, dreams, fears, and expectations for this semester.
- Week 3* Of everything you've seen, heard, done, or had happen to you during these first two weeks at VCU, what has been most striking?
- Week 4* When we speak of personal space [a concept introduced in a course reading by Brent Staples], we speak of people or things intruding on it, of having enough or not, of being comfortable in our space or not. People, places, sights, sounds, and actions—all of these affect our 'space' just as we each affect the space of others. What is your space like at VCU?
- Week 5* In English 101, one of the readings is 'Dangerous Parties.' What is 'partying' like here at VCU? What role do you think 'partying' plays here? How do you feel about it?
- Week 6* Classes have now been in session for a little more than a month. How are you feeling about being a student at VCU? If you're feeling positive, what has contributed to your comfort here? If you're feeling less than positive, what's missing for you?
- Week 7* Many of you commented on the diversity of the student community at VCU, which has long been a distinctive characteristic of this university. As a VCU student, how would you react to this statement: 'Students of various racial and ethnic backgrounds get along well'?
- Week 8* Most English 101 classes have been reading about AIDS. In addition to HIV infections, we know statistics about some other sexually transmitted diseases (STDs). For instance, about 10% of college women have chlamydia, which often has no obvious symptoms. Last year alone, almost 1,700 visits to the Student Health Services were related to STDs. Recent estimates say that by 18 years of age, 78% of women and 86% of men are sexually active. We know that college students feel little to no sense of personal risk, though these statistics are alarming. Since much is said about 'safe sex' methods, there seems to be a discrepancy between risk and practice. What do you think—why is the use of condoms relatively low?
- Week 9* Many of the prompts thus far have been about your overall experiences at VCU or about specific issues like 'personal space' or 'partying.' Now we'd like you to turn to a more academic topic. It's midterm. Do you know what your grades are? What kind of feedback have you gotten so far about how successful you've been in your courses?

- Week 10* This week's section in the English 101 reader is entitled 'Educational Short Cuts: Are We Cheating Ourselves?' Here are some actual scenarios from VCU Academic Integrity Policy cases:
1. Two students submit term papers for the same class and, upon reading them, the instructor notices that many of the quotes and other copy are exactly the same.
 2. A student submits an exam paper which has the same answers as the instructor's exam key, including the mistakes that the instructor has made in solving the problems.
 3. An instructor has placed materials needed for a class assignment on reserve in the library. A student in the class, who delayed working on the assignment, improperly removes the material from the library so that it is no longer available to the other students in the class.
- What kind of academic dishonesty have you either observed or participated in here at VCU? What do you think the university should do about this problem?
- Week 11* With nearly 22,000 students, VCU is a big school. The general folklore about college differences is that students at small schools have better communication with their teachers than do students at large schools. What is communication like between you and your instructors? Also, if you could have a special relationship with one faculty member (your advisor or someone else), what would you like it to be?¹
- Week 12* As you know, life does not always go smoothly. Things like these actually happen to many students:
1. A friend reacts to the relative freedom of college by becoming heavily involved with alcohol.
 2. A phone call comes from home: parents have decided to separate, intending to divorce as quickly as possible.
 3. We see on the news where a VCU-connected person is missing or held hostage and feel angry and helpless.
- What kinds of serious crises have you and your friends here experienced this semester, and how have you/they coped?"
- Week 13* The semester is moving toward a close, and you are probably making academic plans for 1991. Has anything happened academically or otherwise that has made you question your ability to succeed/remain at VCU?
- Week 14* During week 14 we returned to students their responses to Prompt 2 and asked them to "Take a look at what you wrote at the beginning of this semester. Compare your thoughts then with the realities you've experienced."²
- Week 15* Ideally, colleges and universities encourage a lively community in which all members—students, faculty, and staff—can discuss ideas, both in and outside the classroom, with a common goal of learning. Have you found VCU a place where you can take part in that kind of dialogue? If so, in what ways has that happened? If not, what suggestions would you make for the university?

Impact

It is all too common for reports of assessment findings to gather dust on the shelf. The report resulting from The Prompts Project, "The Challenge of the First Year," led instead to a series of discussions and actions that continue to this day.

The first effect, though, was evident even before Hodges wrote the report: The readers,

who had been “hearing” this environmental scan in students’ own words, quickly began talking about what the students were telling us. These readers took students’ voices into meetings about then-present issues and into planning sessions about the future, thus letting students themselves have a voice as advocates for change.

Leaders of The Prompts Project took student comments about large classes and developed a grant proposal, “Improving Student Success and Satisfaction in the Large Classroom Environment.” Funded by the State Council for Higher Education for Virginia’s Funds for Excellence Program, the grant undertook four pilot projects that tried in various ways to ameliorate the negative aspects of large classes. Several of the pilot efforts—Supplemental Instruction, use of technology to increase faculty-student communications and feedback, and Freshman Interest Groups—were successful enough to receive permanent funding from the university. Another effort originating in The Prompts Project was a summer institute for faculty teaching large course sections. During the institute, we discussed how Chickering and Gamson’s (1987) “Seven Principles for Good Practice in Undergraduate Education” could enhance large-classroom settings. Faculty implemented these ideas the following academic year.

Individual units around campus used the findings to change intervention strategies. For example, the student health service put far more emphasis on social marketing after seeing students’ responses. People continue to refer to The Prompts Project in current retention discussions, even though a decade has passed since the study. And because we learned so much of value from this project, we will soon implement a similar study, The Voices Project, with closer focus on our first- and second-year students’ academic issues.

Notes

¹ This final sentence is admittedly unfortunate in its phrasing.

² The idea for this prompt originated with research by Miami University, Ohio.

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Part 3



End of Program/Course Evaluations



Using Interactive Focus Groups for Course and Program Assessments

Barbara J. Millis

Assessment is becoming increasingly important on most campus, but as Carmean (2003) convincingly demonstrates in outlining “ten barriers to successful assessment initiatives,” it also carries a great deal of negative baggage. Angelo (1999) noted nearly five years ago that “Today, most faculty and academic administrators have finally, if reluctantly, come to accept that dealing with both [accountability and improvement] is a political and an economic inevitability” (p. 1). Huba and Freed (2000), however, remind us that faculty should be committed to “assessing for improvement rather than accountability” (p. 87). Assessment for both reasons is certainly a common practice at the US Air Force Academy (USAFA). For example, all departments routinely prepare unit self-assessments focused on their core courses and their impact on USAFA’s seven educational outcomes, reinforcing a close alignment between individual courses and broader mission elements. These educational outcomes include critical thinking, intellectual curiosity, and cooperative and independent learning. Because of this departmental and institutional commitment to viable assessment, there is a strong need for expertise and assistance. In many cases, the Center for Educational Excellence (CEE), USAFA’s unit responsible for faculty development, assessment, academic technology, and research, has been increasingly involved in helping departments gather and interpret both quantitative and qualitative data.

The USAFA has developed a unique process, interactive focus groups, to acquire qualitative data from those most directly affected by curriculum and pedagogical transformations—the students. Focus groups have been used in academia for some time, and Libby Morris’s essay in this volume outlines some of the more common approaches to focus groups. However, the USAFA focus group model incorporates a number of unique elements, making this a novel approach to qualitative assessment.

An Overview of the USAFA Focus Group Model

The focus group model developed at USAFA employs a variety of techniques to maximize data collection from as many students as possible. An optional survey, an index card activity, and a group-based roundtable ranking activity, in addition to the series of open-ended questions make this model unique. This highly structured, yet efficient, protocol has been widely embraced by faculty members, course directors, and departments despite their varying assessment needs. For simplicity sake, we refer to all these parties as “clients.”

The focus group protocol is typically used with student volunteers who come to a neutral location to share ideas about their courses. But, in many instances, because class sizes are typically under 20 students, we will use the same protocol with all students enrolled in a given course. To assess, for instance, the effectiveness of a new core law course, all students enrolled in the three pilot sections participated in a focus group conducted by a CEE representative and a member of the law department who knew the course content, but who was not teaching the course at the time.

The focus groups are organized systematically to collect as much data as possible within a 50- to 60-minute time limit and so that long-term comparisons are possible as courses or programs are modified. Rossi and Freeman (1993) emphasize that decisions should be based on the convergent patterns in the evidence, much as a courtroom jury must sift through complex and often conflicting evidence to reach a verdict. Similarly, Nyquist and Wulff (2001) advocate a research perspective when working with faculty on course or program improvement because “the approach is both systematic and complete and also familiar and appealing to the client” (p. 46).

Meeting with the Focus Group “Client”

All focus groups begin with a client-centered discussion to explore the course objectives and the objectives for the focus group. Included in this discussion are questions and activities that would provide valuable data and the logistics involved in selecting participants, setting up the room, and providing refreshments, if any. We typically share with clients the questions used in previous focus group sessions. Often, clients will have similar concerns such as the grading system or the textbooks. In other cases, the questions will be unique to a specific course or approach. For example, first-year engineering students expecting passive lectures suddenly learn that they will be actively involved in problem solving and group interactions. They consider these demands stressful. Thus, instructors for a first-year, problem-based engineering course were interested in what Woods (1994) called the “grieving process” for coping with change in the academic environment (pp. 1.1-1.2).

Until USAFA opened a video conferencing facility (VTC)—where audiotaping is easy and almost fool-proof—the CEE used a paired approach with one staff member responsible for conducting the actual session (the facilitator) and another staff member responsible for “logistics,” including setting up and monitoring portable audiotaping equipment and making notes of responses to open-ended questions. Now that focus groups routinely take place in the VTC, only one facilitator is needed because the equipment is “push-button” ready and hand-generated back-up transcriptions are not needed.

The transcription preparation process has been simplified through the use of a medical transcription service. This service can turn around a one-hour tape in a day at a cost of about \$75, money well spent given the need for rapid feedback. Because the service returns the transcript as an e-mail attachment, we also have the ability to correct errors and omissions.

Components of the Focus Group Protocol

The Optional Student Survey

Depending on the client’s objectives, the students may receive a survey as they arrive for the focus group, a practice that reinforces the seriousness of the project and helps students feel at ease when they have an initial task to perform. The questions on the survey are often idiosyncratic, such as asking students how much time they devote to the course. The surveys are collected and the responses tabulated anonymously.

Instructions for Students

After the expected students arrive, the facilitator explains the nature of the focus group session, including the ground rules for discussion, while emphasizing the confidentiality of responses and describing how they will be used in reporting. Students are also made aware that the session will be audiotaped. To ensure confidentiality, each student is assigned a number for identification purposes. Students quickly begin saying things such as: "This is Student Ten. I agree with Number Three's idea, but I think that Number Twelve's proposed changes to the final exam will cause greater learning and less grief for students."

The Initial Focus Group Activity: Ratings on Individual Index Cards

After the students complete the survey, if one is used, and hear the introductory remarks, they are handed an index card. Working independently, students jot down on the index card (which also includes their assigned response number) a word or phrase to describe the course (or program) and a number from 1 to 5, with 5 indicating a high level of satisfaction with the course (or program). Usually the facilitator has the students indicate, roundrobin fashion, their responses. Typical comments might be: "This is Student Six: I gave the course a five and an 'Awesome'" to "This is Student Eight. I gave this geography course a number one. My phrase is: 'As dry as eating saltines in the Sahara.'" This public disclosure serves a number of functions. First, it enables students to feel comfortable with their peers. Because everyone has candidly revealed his or her impressions, no one needs to "second guess" another student's perceptions. The facilitator is also quickly able to determine the overall "climate" of the group—knowledge that can help him/her formulate probing questions. Finally, the open disclosure establishes an atmosphere of trust before the facilitator asks open-ended questions.

This focus group model proves useful for both course and program assessment. For example, to learn more about the management major, we gathered data on the program by conducting focus groups in the management capstone courses over a two-year period. In this case, the students rated the entire major and offered descriptive words to support their assessments. During this two-year period, the department was "closing the loop" by making changes suggested by the focus groups and other data sources and then measuring the impact of those changes. This assessment process also assisted in the department's successful AACSB accreditation.

Similarly, after the initiation of a first-year experience course piloted in Fall 2002, the CEE conducted focus groups with the first-year students enrolled in this course. This assessment practice was embedded in the project from its inception, a practice recommended by other faculty development/assessment experts familiar with other first-year experience courses (Stassen, 2000, p. 274). The focus groups revealed some "pluses," such as the perceived relevance of the course, which focused on a real-world scenario (the Gulf War) from multiple disciplinary perspectives. It also uncovered some weaknesses such as a workload students perceived as too demanding for the credit given.

The Open-Ended Questions

Following the index card activity, open-ended questions are posed by the facilitator, who has discussed with the client beforehand which questions all students should answer and which ones are suitable for random responses. Typically, the open-ended questions target issues of particular concern to the client. For example, the Law Department was interested in the value of a new textbook, while an English professor wanted to understand the impact of one-on-one grading conferences that had replaced traditionally marked papers. A course director for a basic

physics course wanted to learn how students responded to “Preflight Exercises,” electronic homework assignments professors used to tailor lectures and class activities based on demonstrated student knowledge. Generally, the facilitator asks 8 to 10 questions during this segment of the focus group.

A Second Activity: Roundtable/Ranking

The Roundtable/Ranking, a group activity, also makes this focus group protocol different from traditional models. The facilitator places the students in small groups for this exercise. Each group receives a handout with specific instructions to brainstorm all the strengths of the course and then to brainstorm all the things about the course that could be improved (See the Appendix for sample brainstorming sheets.). The paper circulates rapidly from one student to another as each writes down an idea and says it aloud. These brainstorms are done quickly so students do not get into an analytical mode. During the next phase of this activity, each group rank-orders the strengths of the course and then the weaknesses. This rank-ordering step is critical because it enables students to reach consensus on their priorities and to eliminate any idiosyncratic responses. The roundtable and ranking exercise take only 10 minutes out of the 50 to 60 minutes available. If time permits, each group can be called upon to report its top three strengths and top three weaknesses, but this step is often omitted to allow more time for the concluding open-ended questions.

The Client Reports

All clients receive summary report which includes (a) survey results, if a survey was administered; (b) a histogram detailing the index card responses; and (c) a color-coded table of the Roundtable/Ranking data. The histogram (Figure 1) offers a visual representation of the rankings of the course or program and provides a list of the descriptive words or phrases (e.g., “Stimulating,” “Limp,” “A Definite Challenge”) associated with those rankings. In addition to highlighting current levels of student satisfaction, the histogram provides useful longitudinal data. For example, successful course improvements would result in a rise in the “four” and “five” columns over time.

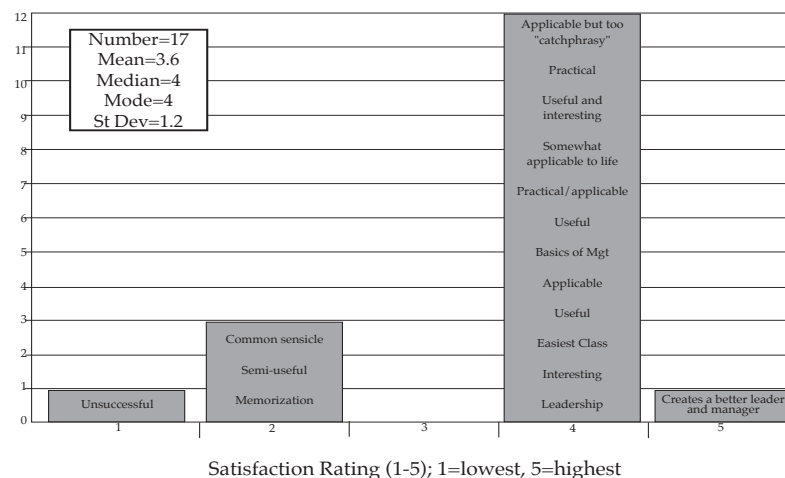


Figure 1. Histogram of Index Activity for Management 210 Focus Group (November, 2001), where the height of the columns indicates the frequency of response for a particular satisfaction rating. The words inside the columns are the descriptors associated with that ranking.

The Roundtable/Ranking data are displayed in a color-coded table (Figure 2), which indicates the top three strengths and weaknesses for a course or program identified by a particular focus group. A CEE assessment expert identifies trends through a quick cluster analysis and color-codes recurrent themes systematically. For example, items related to the workload—whether identified as strength or weaknesses by any team—might appear in orange. Textbook-related comments might be coded in blue. We deliberately use the same colors for similar items in every report: This color consistency makes changes over time easy to spot.

Rank-Ordering of Course Strengths			
Team One	Team Two	Team Three	Team Four
Applicable to AF and real life	Teachers	Applicable	Personal finance
Experienced and enthusiastic instructors	Relevance	Leadership	Goal Setting
Financing block	Organization	Financing	Motivation and leadership
		All-encompassing	

Thread	Color Code	Number of Occurrences
Applicable		3
Personal Finance		3
Leadership		2
Instructors		2

Rank-Ordering of Course Weaknesses			
Team One	Team Two	Team Three	Team Four
Memorization of terms	GR	More conceptual	Remove CPM
"Wordy"	Terms	More group interaction	Reduce memorization
CPM	Lack of current events	More on investing	Lack of application

Thread	Color Code	Number of Occurrences
Memorization of terms		4
CPM		2
More application		2

Figure 2. Roundtable/Ranking Activity for Management 210 Focus Group (November, 2001) showing thematic representation of course strengths and weaknesses.

Quick Course Diagnosis (QCD)

Over time, the demand for focus groups has skyrocketed, but many clients also wanted to have the focus group data without devoting an entire class period to data collection. To address this need and staffing constraints, an abbreviated version of the focus group protocol, known as a Quick Course Diagnosis (QCD) was developed. The QCD method involves a single facilitator who conducts only the Index Card and the Roundtable/Ranking activities. The entire process can be completed in 15 to 20 minutes. To augment this data, the class

participates in a five-minute group-consensus activity, determining the top three strengths and “weaknesses” (things to improve) of the course. A student or the CEE facilitator records the consensus-building process, giving CEE a permanent record of this portion of the QCD. This information is also included in the final client report, similar to the one described above.

QCDs are not as data-rich as the focus groups because of the omission of open-ended questions; however, the three reports prove extremely valuable. This trade-off results in less time devoted to classroom administration and decreased costs because there is no need for the transcription service.

The Client/CEE Feedback Session

Rather than simply hand-off the focus group or QCD reports, CEE staff members prefer to meet with their clients to discuss the assessment results. During this meeting, we encourage reflection and appropriate interpretation of the data and explore possible ways to strengthen a course, program, or major. The data provide a solid foundation for informed, research-based decision-making.

Conclusion

Students are asked to comment on the value of the focus group process at the close of each session. Without exception, all cadet focus groups have indicated that they like the purpose and format of these structured interviews. They enjoy the informal interactions far more than paper-and-pencil surveys or bubble sheets, value that their opinions matter, and express concerns about the impact of their responses on the Academy.

The depth of focus group data far exceeds that of surveys or end-of-course critiques and has been invaluable in course and program improvement. For example, the law department made significant changes in their course structure and content, the textbook, and evaluation methods. A core course linking geography and meteorology adopted new texts and activities that fostered integration. Based on focus group responses, faculty are also incorporating active and cooperative learning approaches into the course. An experimental first-year course in problem-based engineering added more “scaffolding” for students over a two-year period.

Focus groups remind us of Parker Palmer’s (1998) words: “Good talk about good teaching can take many forms and involve many conversation partners—and it can transform teaching and learning. But it will happen only if leaders expect it, invite it, and provide hospitable space for the conversation to occur” (p. 160). Structured focus groups allow those conversations to take place.

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Appendix A

Index card numbers (top right corner): ____ ____ ____ ____ ____

Roundtable Activity # 1

Passing this sheet of paper rapidly from one person to another, please jot down all of the relevant strengths of the course, saying them aloud as you write.

Working as a team, rank order the strengths you identified, with the most important ones at the top of your list. Rank at least three by writing the numbers "1," "2," and "3" next to the strengths you identified.

Roundtable Activity # 2

Passing this sheet of paper rapidly from one person to another, please jot down all of the "negatives" of the course—the things you would change, saying them aloud as you write.

Working as a team, rank order the weaknesses you identified, with the most significant ones at the top of your list. Rank at least three by writing the numbers "1," "2," and "3" next to the weaknesses you identified.



The College Classroom Environment Scale

Roberta Jessen &
Judith Patton

For the majority of students at Portland State University, the general education program, University Studies, is based upon core learning goals and objectives. The goals of the program are accomplished through a four-year, interdisciplinary curriculum based on learning communities. Creating community on college and university campuses has been particularly explicit goal for higher education since the publication in 1990 of *Campus Life: In Search of Community* (The Carnegie Foundation for the Advancement of Teaching).

The first-year course, Freshman Inquiry, is the foundation of the program. It is a year-long course developed by an interdisciplinary team of faculty paired with undergraduate student mentors. We have found that without community building many of the program goals are difficult to achieve. While the concept of community has obvious co-curricular dimensions and implications, it is reasonable to assume that one of its primary locations on campus is the classroom. Evaluating this construct within the classroom is a challenge, calling for both qualitative and quantitative approaches.

In 1994 we began using the College Classroom Environment Scale (CCES), developed by Roger Winston at the University of Georgia, as one of our primary measures of students' perception of the community environment in the classroom. Eight years of use and the development of more external and internal comparative data have enhanced the instrument's utility and credibility for us. It is now an expected and accepted part of our assessment process.

The purpose of the CCES is to develop information about student perceptions of the academic environment at both the classroom level and larger organization levels. The CCES consists of 62 items on a Likert scale, forming six subscales or constructs. These are as follows:

1. *Cathectic Learning Climate (CLC)*. This scale indicates a charged academic atmosphere that stimulates students to be active class participants and to seek classmates' opinions and reactions.
2. *Professorial Concern (PC)*. This scale indicates to what extent students perceive the instructor as being personally concerned about them as individuals. Higher scores on this scale suggest students see the professor as being friendly, caring, open, empathetic, and respectful.

3. *Affiliation (AF)*. This scale indicates students' perceptions of numerous informal interactions with each other. It also checks to see if a supportive and friendly peer atmosphere exists. Cooperation and development of mature interpersonal relationships are perceived by students as valuable.
4. *Academic Rigor (AR)*. This scale is descriptive of an environment that is perceived as intellectually challenging and demanding. Students perceive excellence and personal responsibility as the norm, which are expressed through high but realistic evaluation standards.
5. *Structure (ST)*. This scale describes an environment where students perceive evaluation criteria and syllabi as clearly articulated and followed. There is little ambiguity concerning assignments or expectations. The instructor is viewed as an authority in the course content.
6. *Inimical Ambiance (IA)*. This scale is negatively scored and is the only subscale where a low score is desirable. This scale itself describes an environment that students see as being hostile, highly competitive, rigidly structured, and one in which they are uncomfortable asking questions or giving opinions. Authority is perceived as arbitrary and is exercised in a dehumanizing and aggressive manner.

The CCES is administered at the mid-point of winter term in every Freshman Inquiry course. These forms are completed in class without the faculty member present, as is done with the end of course evaluations. However, we found that the student mentor or some other person must supervise the administration to reduce external validity problems. The class mentor stays with the students to make sure the protocol for the survey completion is followed.

Faculty receive individual reports with their scores and an explanation of the subscales. Many faculty were initially resistant to the assessment of the class environment and had problems interpreting their scores. They also wanted normative data so that they would have some basis for comparison; however, there was very little available in the early years. Winston, author of the CCES, encouraged us to develop such data for our own purposes. Until we were able to establish our own norms, it was difficult to convince faculty of the CCES's usefulness.

In the current system, individual reports are sent to each faculty member. Also included is a table of aggregate scores from each year of the administration. Scores are followed by a brief explanation of the subscales with examples of questions used to compile the subscales. Faculty often look forward to finding out how their own scores change from year to year.

Use of the CCES Data

The CCES data is reviewed by the director and the administrative body of the program. Data are incorporated into the Annual Program Assessment Report. We have found that the CCES scores validate and complement the findings of our qualitative data collected each term. We use the CCES data for program improvement in the following ways:

- Faculty who consistently score well are invited to present sessions for the fall and spring program retreats. They are also asked to facilitate faculty development sessions in order to share their successes and best practices with other faculty.

- When faculty scores are significantly lower than the aggregate, resource personnel are made available to work with faculty members on an individual basis to determine student concerns and ways to improve the climate within the classroom.
- Faculty use their scores in professional portfolios for purposes of annual review, promotion, and tenure.

Within the classroom, faculty use the CCES data in the following ways:

- Because of the interdisciplinarity of the program, faculty can evaluate different teaching strategies they may use for presenting material in diverse disciplines.
- Often faculty have used the results to discuss and clarify issues in the classroom directly with their students. This is helpful in two ways. Students feel that the assessment process has been meaningful and that they have a voice in the classroom. Faculty and students can work together as a community to resolve problems before they turn divisive in the classroom.
- When faculty review the subscales and their results it may help them understand how their students perceive the class environment as opposed to how they themselves perceive it. This may be an eye opening experience for many faculty.
- Faculty and students may use the results to celebrate the success of the community which has been built in their class.

Analysis and Conclusion

The data collected from years of using the CCES help validate the success of our Freshman Inquiry program. The following are those things we have learned from the data:

- Our faculty aggregate scores for Professorial Concern remain the highest of all subscales except for one year when this subscale was tightly clustered with those of Structure and Academic Rigor.
- Scores for Academic Rigor and Professorial Concern always tend to be higher than all others. Subscale scores for Inimical Ambiance have remained at less than a .20 difference for the eight years of use. This shows us that students continue to perceive a feeling of community within our classrooms over an extended amount of time. This has a direct impact on our work in sustaining such a unique program.
- Faculty who teach two sections of the same inquiry course, using identical pedagogies and content, have found that scores are often remarkably different from one class to the other. This helps to explain how personalities and learning styles of students in a class have a direct impact on how they perceive classroom climate. This has resulted in consultation directly related to a particular cohort of students.
- Students say that they appreciate when their instructor discusses the results of the CCES assessment with them. Students may have few comments when this happens, but it is the acknowledgment of the importance of their participation that appears to hold the real value for them. Working with faculty to assist them in developing alternative teaching strategies has also been very successful.

- The CCES data help inform us about areas of need within the program. We can then concentrate on topics that address the issues raised for our faculty development program, biannual retreats, and particularly our new faculty orientation program.
- The data identify faculty who excel at creating community in the classroom. Those faculty can function as mentors to new faculty and others, as well as help in the design of faculty development sessions to improve the overall program.

The CCES has proved to be a valuable element of our total assessment program. However, it is only one part of a yearlong assessment plan. The data is used in conjunction with course evaluations, student portfolio review results, and feedback from mentors, team members, and program administrators.

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Part 4



Surveys



The CIRP Freshman Survey and YFCY: Blending Old and New Tools to Improve Assessment of First-Year Students

*Linda J. Sax &
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The recent surge of interest in assessing the first year of college has made campuses more reliant on information that documents students' experiences and demonstrates institutional effectiveness. Many first-year assessments collect data at a single point in time, yielding data on students' behaviors, attitudes, and perceptions, but alone they tell us very little about how students have changed since entering college and what impact the first-year experience has had on their development.

To assess the impact of campus environments and college experiences on important first-year student outcomes, it is critical to collect data on students at a minimum of two time points—when the students arrive at the college and after some exposure to the first-year experience. These longitudinal data may be used within Astin's widely known Input-Environment-Outcome (I-E-O) model of assessment, which provides a framework for understanding which college environments and experiences contribute to which college outcomes (Astin, 1993). Essentially, information collected on students at the point of college entry may be viewed as "inputs" that shape students' college experiences; the impact of college "environments" on student "outcomes" cannot be assessed until student differences on these "input" characteristics are accounted for.

The concept behind the I-E-O model has been central to the work of the Cooperative Institutional Research Program (CIRP) at UCLA. For more than 35 years, the CIRP has provided colleges and universities with a tool to assess students at the point of college entry (the CIRP Freshman Survey) and has offered surveys that collect longitudinal follow-up data. More recently, the CIRP has introduced a new survey, Your First College Year (YFCY), specifically designed to assess students' experiences over the first year of college. Linking data from CIRP and YFCY enables institutions to conduct longitudinal assessment of the first-year experience. The history, purpose, and function of each of these two surveys are described below. In fact, CIRP and YFCY have emerged as the only national, longitudinal study of students over the first year of college.

CIRP Freshman Survey

The CIRP Freshman Survey was initiated in 1966 at the American Council on Education and has been housed since 1973 at UCLA's Higher Education Research Institute (HERI). Each

year the CIRP surveys some 350,000 to 400,000 full-time students who constitute the entering first-year classes at a national sample of 650 to 700 institutions. All regionally accredited two- and four-year colleges and universities are eligible to participate in the CIRP.

Participating colleges administer the Freshman Survey (also known as the Student Information Form, or SIF) at the start of first year of college, usually during orientation. The survey is a four-page questionnaire, appropriate for a variety of students attending all types of collegiate institutions. Although the national normative data published each year are based only on first-time, full-time first-year students, participating institutions receive separate reports for their part-time and transfer students. The survey is revised annually to reflect the changing concerns of the academic community and to address emerging research questions. However, the survey also repeats items from year to year to help institutions assess trends. Data collected from each student include:

- *Demographic characteristics*, including age, gender, racial/ethnic background, and religious affiliation, as well as parental education, income, and occupation
- *Secondary school background*, including high school grades, high school courses, year graduated from high school, and level of academic involvement in high school
- *College finances*, including sources of financial support and student concern about finances
- *Orientation toward college*, including why students chose to attend college, why students selected a particular college, number of other college applications, and student expectations of their college experience
- *Aspirations*, including probable college major, career preferences, highest degree sought, and life goals
- *Attitudes and values*, including personal values (e.g., helping others, achieving recognition, being financially well-off), political orientation, and attitudes toward current national issues (e.g., affirmative action, abortion, drugs, rights of criminals, handgun control, taxes).

In addition, participating institutions may add up to 21 supplemental questions for their own students. Complete tabulations of student responses to these local questions are included in the summary report returned to the institution.

Institutions use their Freshman Survey data for a variety of purposes, including:

- *Admissions and recruitment*. Creating a profile of entering first-year class, identifying new markets for recruiting activities, identifying factors that affect student decisions about college choice, assessing the impact of financial aid on college selection decisions
- *Curriculum and program planning*. Assessing outreach efforts, assessing the academic preparation of entering students, assessing students' intended majors and expected campus involvement, curriculum planning and review, evaluating institutional policies and procedures
- *Public information*. Feature articles in the campus press; press releases for local, regional, and national news media; articles for alumni bulletins and magazines; public addresses to community, government, and professional groups
- *Institutional research*. Trends in the characteristics of new students; comparisons

between students in different schools, divisions, or departments; comparisons with students at institutions of similar type; comparisons with students in national norms; baseline data for longitudinal studies of student development and educational outcomes; baseline data for retention studies

- *Trends analysis.* The Freshman Survey repeats items from previous years, enabling institutions to assess trends in the characteristics, experiences, attitudes, values, and expectations of their entering first-year students.

The oldest survey of its kind, the annual Freshman Survey also provides information about our national population of first-year students that is unmatched in terms of breadth and depth. Nationwide results are published each year in *The American Freshman: National Norms* and receive widespread attention in the national press and among researchers and policymakers representing a wide range of fields and interests. National data are useful to the general community of current and future college students, their parents, and college faculty as well.

Your First College Year (YFCY)

In 1999, the Higher Education Research Institute joined forces with the Policy Center on the First Year of College to develop and administer a new survey instrument titled “Your First College Year” (YFCY). Designed as a follow-up to the CIRP Freshman Survey, YFCY was conceptualized to fill a void in the nation’s survey market, namely the absence of an instrument designed specifically to assess the first college year. Between 2000 and 2002 YFCY was developed and pilot tested with support provided by grants from The Pew Charitable Trusts and the Atlantic Philanthropies. Since 2000, more than 67,000 students at 325 institutions have participated in YFCY.

The YFCY instrument was developed in consultation with students, faculty, and academic and student affairs administrators at two- and four-year campuses around the country. Approximately one-third of the survey items on YFCY directly posttest items on the CIRP Freshman Survey. YFCY addresses several aspects of the first college year, including:

- Academic achievement
- Academic skills and engagement
- Learning strategies and pedagogical practices
- Residential and employment experiences
- Interactions with peers, faculty, and staff
- Satisfaction with curricular and extracurricular experiences
- Patterns of behavior
- Student values and goals
- Self-confidence and feelings of personal success

The instrument is available online or as a paper form. Both versions include space for campuses to ask up to 21 questions of local relevance. Institutions may administer the survey in the classroom, via campus mail, or via e-mail. Although YFCY is intended to serve as a follow-up to the CIRP Freshman Survey, it can be used as a stand-alone instrument. Institutions use their YFCY data for a variety of purposes, including:

- *Comparative analyses.* Because students’ responses to the survey are compared to national and institutional peer group aggregates, participating institutions

can determine where their first-year cohort “stands” relative to the experiences of first-year students at large. In addition, participating institutions are able to disaggregate responses to conduct comparisons between different groups of students at their campus. For example, it is possible to compare first-year outcomes such as adjustment or retention based on participation in a learning community, academic “cluster” program, or a first-year seminar. It is also possible to analyze the data by gender, race/ethnicity, or place of residence. Space for institution-specific supplementary questions offers additional opportunities to conduct within-institution analyses.

- *Descriptive analyses.* YFCY collects information on a wide range of cognitive and affective measures providing comprehensive data for single- or multiple-institution analyses of persistence, adjustment, and other first-year outcomes. These analyses can answer questions about the first year of college including:
 - What are students’ academic experiences in the first year of college?
 - What are students’ social experiences in the first year of college?
 - Which factors influence students’ decisions to re-enroll for a second year?
 - How well do students adjust to their first year of college?
 - How do first-year students spend their time?
 - What are the values, attitudes, and goals of first-year students?
- *Longitudinal analyses.* Because YFCY is designed as a follow-up survey to the CIRP Freshman Survey, it allows for longitudinal research on the first year of college. Therefore, institutions are able to use these data to evaluate the academic and personal development of students over the first year of college and to assess the impact of institutional programs, policies, and practices on the students’ experiences and outcomes. Further, YFCY may be used in conjunction with local baseline data, registrar’s data, or other campus-based assessment efforts to enhance an institution’s understanding of the first-year experience on its campus.
- *Trends analyses.* Like the CIRP Freshman Survey, YFCY repeats items from previous years. As such, institutions participating regularly in YFCY are able to assess trends in the characteristics, attitudes, values, classroom practices, personal behaviors, satisfaction, and adjustment of their entering first-year students.

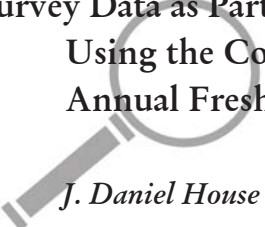
Impact on the Field of Educational Research

The number of institutions participating in YFCY has grown each year it has been offered. Larger and more diverse samples of students and institutions suggest greater opportunities to inform a national perspective on the experiences of first-year college students. Further, since the majority of YFCY respondents also participate in the CIRP Freshman Survey, there is unprecedented opportunity to contribute to scholarship on student development over the first year of college. This is critical since the vast majority of research on college student development is based on studies of students over four (or more) years of college. The four-year time frame prohibits an understanding of the role that the first—and arguably the most pivotal—year of college plays in shaping students’ capabilities, values, attitudes, perceptions, and aspirations. It is our hope and expectation that the data generated by CIRP and

YFCY—at both the institutional and national levels—will make a major contribution to the policy and research dialogue on the first-year experience.

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Survey Data as Part of First-Year Assessment Efforts: Using the Cooperative Institutional Research Program (CIRP) Annual Freshman Survey

J. Daniel House

University planners need assessment information that enables them to understand the characteristics of entering college students and the relationship of those characteristics to subsequent college outcomes. The Cooperative Institutional Research Program (CIRP) Annual Freshman Survey provides a very useful assessment tool for understanding what an institution's students are like when they begin their first year of college. The survey is administered to first-year students during either an orientation session before the start of or early in the fall semester. On this survey, a wide range of student characteristics are assessed, such as values and attitudes, high school experiences, goals and aspirations, and educational and career plans.

Campus Presentations of CIRP Data

Several campus groups typically find CIRP data useful for strategic planning. For instance, a discussion of student characteristics is conducted with faculty and staff who teach first-year seminar courses. Instructors are given an overview of the personal and professional goals of new students and their expectations for achievement in college. Results are also presented at special academic programs (such as graduate teaching assistant training programs) and to the student affairs staff. Consequently, these assessment findings have been used to support several types of campus initiatives for first-year students.

Another campus group to whom CIRP data are annually presented is the admissions/enrollment committee. Here, the discussion focuses on the reasons students are going to college and their reasons for selecting this particular college or university. CIRP results provide meaningful data regarding specific facets of the institution that are important to students when making their college choice. Factors such as why they are going to college (e.g., personal goals, career goals, and family influences), reasons for selecting this institution (e.g., location, tuition, academics, and special programs), and family information (e.g., parental income and education) are considered. In addition, these data may be further broken down by students' major field to enable university planners to monitor student characteristics and develop programs to improve students' first-year experience across the disciplines.

Student Characteristics and First-Year Outcomes

An important part of assessing first-year students' characteristics is conducting longitudinal studies to determine how those initial characteristics are related to subsequent college outcomes. For instance, an important indicator of student progress is retention to the second year of college. Northern Illinois University has conducted several studies and found that student characteristics assessed by the CIRP are significant predictors of students' persistence to their second year. Individual items on the survey can be grouped together to comprise several factors, and those factors are related to retention. An assessment of almost 10,000 students found that high school curriculum, academic self-concept, and achievement expectancies were all significant predictors of college persistence for two years (House, 1996).

Another critical measure of student success during the first year of college is achievement in science and mathematics courses. Because many careers such as business, health sciences, and engineering require mathematical skills, lower achievement levels during the first year of college can restrict students' choices of majors and affect their subsequent career paths. Several assessments have found CIRP data to be helpful for understanding factors that influence student success in science and mathematics. For instance, student self-ratings of their mathematical ability and overall academic ability were significant predictors of achievement in a finite mathematics course taken during the first year (House, 1995b). Similarly, the same variables measured by the CIRP Annual Freshman Survey were significant predictors of achievement in first-year college chemistry (House, 1995a). More recently, we have found that several student characteristics measured by the CIRP (such as achievement expectancies, academic self-concept, and financial goals) were predictors of the first-year grade performance of students in science, engineering, and mathematics (House, 2000).

Linking CIRP Data With Other Information Sources

In order to facilitate student growth during college, several types of instructional practices are used and various out-of-class experiences are typically provided. However, the effects of specific instructional strategies and student experiences on college outcomes still need to be assessed. One of the attractive features of the CIRP Annual Freshman Survey is the ability to merge student data with assessment data obtained from other surveys. For instance, the Your First College Year (YFCY) survey is designed to assess a number of the same dimensions as the Freshman Survey, as well as academic and social experiences during the first year of college. In addition, the College Student Survey (CSS) measures more than 200 college experiences, student changes, and outcomes. Individual student responses on these surveys can be merged into a single large data set. These surveys can be used to provide a longitudinal assessment of students at the time they began college, at the end of their first year, and at a later point in their college career. This strategy allows an assessment of student growth and achievement and an examination of college experiences that contribute to that growth, thereby providing a unique perspective on student development.

Conclusion

In many instances, institutions use their CIRP data to provide a cursory overview of the characteristics of their new first-year students. However, it is important to realize that the arrival of the CIRP data mark the beginning of an effective use of the data. Institutional

improvement can be realized by the data being prepared and provided to the appropriate campus offices. The institutional researcher becomes a key campus resource by conducting campus-based research using CIRP data and by linking CIRP data with other campus data sources. This process allows CIRP data to be incorporated into a more broad-based assessment program directed toward understanding students' first-year experiences and outcomes. There needs to be consistent communication between institutional researchers, first-year experience coordinators, and campus CIRP representatives. Further, CIRP data can provide an important foundation for comprehensive assessment efforts and be a strategic resource for improving first-year programs for students.

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What Students Expect May Not Be What They Get: The PEEK (Perceptions, Expectations, Emotions and Knowledge about College)

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"I can't wait to go to college...Classes meet only a few hours each day and the rest of the time is mine!!"

"I didn't spend a lot of time studying in high school, but my grades were okay so I shouldn't have to work very hard in college."

"Hey...if I get in trouble in my college courses, my teachers will tell me exactly what to do."

As we can see from these three quotes, many entering college students have unrealistic or incorrect perceptions, expectations, emotions, or knowledge about what college life will be like for them. Researchers in higher education (e.g., Astin, Tinto, and Pascarella) have often pointed out the danger of students' misperceptions and unrealistic expectations on their academic achievement, satisfaction, and retention, particularly in students' first year of college. Success in school is not simply a result of possessing good reading, math, writing, and study skills. Students' expectations about their college experience have a powerful influence on their thoughts and actions when they get to college. The degree to which students' expectations accurately reflect their college environment will have a critical impact on their academic performance and satisfaction. Many academically able and gifted students drop out of college during their first year because of personal, social, or academic expectations that are inaccurate or not fulfilled.

What is the PEEK?

The Perceptions, Expectations, Emotions and Knowledge (PEEK) about College (Weinstein, Palmer, & Hanson, 1995) is an assessment tool designed to help identify students' ideas, attitudes, beliefs, and expectations about what college will be like for them. The PEEK is a brief screening measure designed to help students as well as student affairs specialists, advisors, counselors, and bridge program or first-year seminar instructors identify possible discrepancies between students' beliefs, expectations, and knowledge about college and the realities they will face at a particular institution. Once any discrepancies have been identified, more accurate and realistic perceptions and expectations can be developed by a variety of interventions in settings

such as orientation programs, advising sessions, bridge programs, first-year seminars, and freshmen interest groups (FIGS) or learning communities.

The PEEK is a self-report assessment consisting of 30 items, which are organized into three categories with 10 items in each category. A student's perceptions, expectations, emotions, and knowledge about college fall into three general categories of the college experience: (a) personal, (b) social, and (c) academic. Students are asked to indicate, using a five-point rating scale ranging from "not at all likely" to "extremely likely," the extent to which they expect to have a particular experience in college. Although norms created by a national team of experts are available, colleges need to consider what is realistic for their institution. What is "normal" for one college setting may not be normal for another one. For example, expecting a lot of guidance on how to succeed in college may be appropriate for a small college setting but not for large state colleges or universities. Also, expectations about maintaining close contact with family and friends is more likely to occur at a local college campus than if the student moves to another city or state to attend college. Finally, expecting individual help from an instructor is more likely to occur in a relatively small community college course than in a lower-division course at a major research university with an enrollment of 100 or more students. For these reasons, it is recommended that colleges establish their own norms to compare students' responses to the realities of their own institutions.

The PEEK Categories

The PEEK yields information about the personal, social, and academic dimensions of the college experience.

Personal dimension. Items in the personal category measure students' expectations about their emotional reactions to college, the degree to which they are prepared to do college-level work, how college fits into their future goals, and the degree to which they will take personal responsibility for their own learning. A sample item is: "I think it will be harder to succeed in college than it was in high school."

Social dimension. Items in the social category measure students' expectations about social pressures in college; interactions with instructors; the nature and make-up of college populations; and their relationships with family, students, and friends. A sample item is: "I will have a lot of free time for non-academic activities while I am in college."

Academic dimension. Items in the academic category measure students' expectations and knowledge about the difficulty of college courses, the nature of learning in college, the roles and responsibilities of college instructors, and the nature of instruction in college. A sample item is: "If I am having difficulty in a course, the instructor will tell me."

Scoring the PEEK

The PEEK can be hand- or machine-scored. Machine scoring can be done using software provided to users. It can also be scored by the publisher using a default system created by the authors. This system is based on national data from students and higher education experts. It is also easy to create custom scoring based on the realities of individual institutions. Because what is a reasonable and realistic expectation for one school may not be appropriate for another, users might want to consider tailoring the scoring to their own institution. Again, these adjusted scoring rubrics can be analyzed locally or through the publisher.

Development of the PEEK

Exploratory data were collected from more than 3,000 college faculty and students at all levels of higher education over a period of about three to four years. This information about possible differences in the personal, social, and academic environments of different colleges was used to develop a large database of items (more than 300 potential items were created). More than two years were spent testing and refining this database to produce a usable (brief, but informative) measure that can help identify students' perceptions and expectations so that these expectations can then be compared to the likely realities of their college environment as determined by the institution.

Uses for the PEEK

For each student, PEEK data provide the baseline information needed to help students adjust successfully to new situations and circumstances. Typically, the PEEK is administered either prior to students' arrival on campus (e.g., summer bridge programs or orientation) or shortly after they begin taking classes (e.g., as part of advising or a first-year seminar). Some ways institutions can use the PEEK, include:

1. *Increasing student awareness.* Examining, confronting, clarifying, and reconsidering their own perceptions will help students become more aware of their expectations about college. This increased awareness can alert students to possible problem areas and encourage an exploration of any inconsistencies. The first step in correcting misperceptions is to know they exist.
2. *Counseling, advising, and orienting students.* Students whose perceptions and expectations appear to be somewhat inconsistent with those of the institution are likely to benefit from interventions that explore those inconsistencies.
3. *Supplementing instruction in a first-year seminar or program.* Individual PEEK results can be used in first-year seminars or programs to generate valuable discussions aimed at developing more realistic ideas of what attending college will be like for students. Depending on individual PEEK responses, the instructor can adapt the curriculum to meet the needs of the class or individualize the curriculum through activities and small-group work.

We know from the findings of many researchers that it takes more than good study skills and learning strategies to succeed in college. The earlier we identify students' erroneous perceptions and expectations about college life, the greater our chances of helping them adjust to the opportunities and demands of college.

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Assessing Student Expectations of College: The College Student Expectations Questionnaire

Robert M. Gonyea

What do new students think their first year of college will be like? In what learning activities do they anticipate engaging? What do they want from their institution to achieve their educational and social goals? Among the most influential educational statements ever circulated in American higher education is the “Principles of Good Practice in Undergraduate Education” (Chickering & Gamson, 1987). Its sixth principle is that “good practice communicates high expectations.” The call for high expectations applies to both faculty members and students; the former must hold their students to high performance standards and students must expect more from themselves and their teachers.

An expectation is more than a wish or a hope. Rather, it is something a student *imagines* will happen, *anticipates* doing or experiencing, or even *requires* from the institution. Expectations are grounded in a student’s self-understanding and in knowledge about the institution that he or she plans to attend. From the perspective of the individual student, an expectation is like a plan or a goal. When directed at the institution, it may represent the conditions by which the student will measure his or her satisfaction with the institution and college life in general. As such, expectations of the institution are a form of psychological contract (Rousseau, 1995).

Expectations affect the college experience in at least two ways. The first is to act as an organizing system or filtering mechanism that helps the individual student determine what is or is not worth attending to or putting effort toward. That is, expectations influence choices, behaviors, and experiences so as to construct what becomes reality for the individual (Feldman, 1981). The second is to act as a stimulus or deterrent to behavior, as represented by psychological theories such as expectancy theory, self-efficacy theory, and motivational theories (Kuh, 1999; Olson et al., 1998). Kuh (2000) writes “to maximize learning and involvement during the first year of college, students need to set personal goals that are high enough so that they must try their best in classes and use campus resources to augment what they are learning in their classes.” In addition, when a student’s expectations are met, he or she is more likely to remain in school and complete a degree. When expectations are unmet, the student may consider dropping out or transferring to an institution with a better fit (Braxton, Hossler, & Vesper, 1995).

The College Students Expectations Questionnaire

The College Student Expectations Questionnaire (CSXQ) is a shortened version of its parent instrument, the College Student Experiences Questionnaire (CSEQ), both are authored by Kuh and Pace. The CSXQ was originally developed in 1997 for use in a project supported by a Fund for the Improvement of Post Secondary Education (FIPSE) grant directed by Karen Schilling at Miami University. The CSXQ measures beliefs about how students will spend their time during the first year. When paired with the CSEQ, administered as a follow-up measure toward the end of the first year, the institution can assess the degree to which those expectations were met.

To date, the CSXQ has been completed by more than 50,000 students at more than 75 different colleges and universities. It is typically administered to new students before the start of classes, at orientation, or during welcome week. The paper instrument is four pages in length and takes about 10 minutes to complete, and an online version is also available. The CSEQ Research Program processes and scores the survey under the Indiana University Center for Postsecondary Research. Participating institutions receive a floppy disk or CD containing their raw data, an electronic copy of the results tables in SPSS format, and a printed copy of the output. For institutions that administer the CSEQ as a follow-up at the end of the first year, a special report comparing CSXQ and CSEQ data can be produced along with the basic CSEQ report.

The CSXQ shares 87 items in common with the CSEQ, not including questions about background characteristics. The common items include expectations of college activities and of the campus environment. The college activities items on the CSXQ are presented in 11 categories:

- Library and information technology
- Student interactions with faculty members
- Course learning activities
- Writing experiences
- Campus programs and facilities
- Clubs and organizations
- Student acquaintances
- Scientific and quantitative experiences
- Topics of conversation
- Information in conversations
- Amount of reading and writing

The campus environment items cover student expectations for the emphases placed on scholarly / intellectual qualities and expectations about the personal / social climate of the campus. This section also asks students what they suppose relationships will be like with other students, faculty members, and administrative personnel and offices.

Making the Most of CSXQ Data

Discovering what students expect from their college experience is crucial if faculty members are to adjust their instructional approaches accordingly and institutions are to modify policies and practices to respond in educationally effective ways. Below are three examples of how CSXQ data can be used to improve the first-year experience:

1. Expectations data can identify areas where socialization efforts are needed to help students develop appropriate attitudes and behaviors to succeed in college. CSXQ information can be used to tailor new student recruitment materials and orientation activities where it is discovered that student expectations need to be modified in order for students to succeed. It is also possible to provide formative feedback to individual students based on their CSXQ responses. The CSEQ Research Program makes the Student Advising Report available for this purpose.
2. Expectations data can help faculty members, administrators, and student affairs professionals better understand who new students are and what they want from their college experience. Faculty members who teach traditional first-year courses, especially those who teach first-year experience courses, can use CSXQ data to influence student expectations directly. Academic advisors, residence hall staff, and campus activities staff can implement programs to encourage students to expect more and set higher learning goals. Both faculty and staff members should take it upon themselves to understand student expectations so that they can fashion more suitable learning environments for first-year students.
3. Expectations data can identify areas where improvements in teaching and learning may be needed and complement initiatives, such as the scholarship of teaching and learning. Typically, the data show that in most areas students are more optimistic for their first year than they subsequently realize. This is commonly known as the "freshman myth." For example, they study fewer hours, write less, and interact with faculty members less than they expect to. This pattern of results prompts questions about whether the nature and amount of assigned academic work is appropriate to cultivate the range and depth of intellectual skills required to succeed in college and beyond.

The CSXQ may also function as an instructional device to help students navigate through their first year of college. While filling out the questionnaire, new students pause to contemplate the learning opportunities that will be presented to them during the coming school year. This leads them to formulate or rethink expectations in areas where they have not given much thought.

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The College Student Experiences Questionnaire: Assessing Quality of Effort and Perceived Gains in Student Learning

Michael J. Siegel

How often do your first-year students ask their professors for advice to improve their writing? To what extent does your institution emphasize an appreciation for diversity and ideas? What gains have your first-year students made in their ability to synthesize ideas, think analytically, write effectively, get along with others, and understand new technology? And how often do your students have serious discussions with others whose background and political opinions were different from theirs?

The CSEQ is useful for assessing the first-year experience of students and helping institutions identify college activities and environmental factors that foster student development and learning outcomes. Examples include how frequently first-year students ask their professors for advice to improve their writing; the extent to which the institution emphasizes an appreciation for diversity and ideas; the overall gains first-year students have made in their ability to synthesize ideas think analytically, write effectively, get along with others, and understand new technology; and how frequently students take part in serious discussions with others whose background and political opinions are different from their own. CSEQ is unique among assessment instruments in that it measures the “quality of effort” students expend in three aspects of the collegiate experience:

1. Campus resources
2. Aspects of the college environment that foster learning and encourage students to take advantage of campus resources
3. The progress—or, self-reported gains—students make in desirable learning outcomes

Among the examples of its usefulness in first-year student assessment, the CSEQ can provide a comparison of the experiences of students involved in Freshman Interest Groups, or FIGs, with a group of students not involved in FIGs. It can provide a measure of satisfaction among first-year students concerning the quality of their relationships with faculty and staff. And the instrument can help institutions identify patterns of student use of the library and other campus facilities.

What is the CSEQ?

Developed in the late 1970s as a national survey tool by then-UCLA professor C. Robert Pace, the CSEQ has been administered at more than 400 colleges and universities and completed by more than 300,000 students. The CSEQ has been well-received by the higher education community—a 1994 National Center for Education Statistics report cited the CSEQ for its “excellent psychometric properties” (Kuh & Siegel, 2000). Now in its fourth edition, the CSEQ has produced five sets of national norms data. In addition, the CSEQ has been cited in more than 250 articles, books, and dissertations, and hundreds of institutional reports (Gonyea, Kish, Kuh, Muthiah, & Thomas, 2003).

The CSEQ is an eight-page questionnaire with more than 160 items that ask students to report on the activities in which they are engaged during the current academic year. Institutions also have the option of administering the CSEQ online via the World Wide Web, in a convenient, paperless format. The web version is identical to the paper instrument. Because the CSEQ asks students to reflect on their experiences during the current school year, institutions administering the instrument to first-year students do so in the spring of the academic year (typically between March and May, or whenever the school’s academic calendar is between two-thirds and three-fourths completed). It can also be administered in the fall to sophomores, at which time students are asked to reflect on their first-year experiences. The CSEQ offers a high degree of flexibility in terms of sampling, allowing institutional users to select populations and sampling methods and encouraging them to develop strategies for administration that best meet their local assessment needs.

What Does the CSEQ Measure?

A versatile and comprehensive self-report assessment tool, the CSEQ encourages students to engage in reflection and self-evaluation. As a result, the instrument provides institutions with several valuable pieces of information about their students. In addition to providing student background characteristics, it measures the extent to which students engage in activities known to be important to their learning and personal development. It also determines the level of satisfaction students have with their institution and provides student ratings of key characteristics of the college environment. Finally, the instrument reports estimates of student gains—or progress—toward important learning objectives.

What are the Major Components of the Instrument?

The CSEQ is divided into three major categories: (a) the Activities Scales, which measure how students spend their time and use their institution’s educational resources; (b) the Environment Scales, which measure students’ perceptions of the college environment; and (c) the Gains Scales, which measure students’ estimated progress in areas that experts consider to be related to desirable learning outcomes.

The Activities Scales

The Activities section of the instrument includes 13 scales that measure the quality of effort (time and energy) students expend in using institutional resources that are provided for their learning and development.

1. Library experiences

2. Computer and information technology
3. Course learning
4. Writing experiences
5. Experiences with faculty
6. Art, music, and theater
7. Campus facilities
8. Clubs and organizations
9. Personal experiences
10. Student acquaintances
11. Science and quantitative
12. Topics of conversation
13. Information in conversations

The College Environment Scales

The CSEQ contains 10 scales related to students' perceptions of the college environment. That is, the scales measure the extent to which colleges and universities foster relationships that are supportive of learning and encourage students to engage in educationally purposeful activities.

Seven of the rating scales refer to the nature by which the college environment emphasizes various aspects of student learning and personal development, including:

1. Academic, scholarly, and intellectual abilities
2. Aesthetic, expressive, and creative abilities
3. Critical, evaluative, and analytical abilities
4. An understanding and appreciation of human diversity
5. Information literacy skills
6. Vocational and occupational competence
7. Personal relevance and practical value of courses

Three of the environment rating scales refer to the nature of students' relationships with others, specifically:

1. Other students and student groups
2. Faculty members
3. Administrative personnel and offices

Estimate of Gains Scales

The Estimate of Gains scales consist of student ratings of their progress toward important educational goals and outcomes. There are 23 gains items on the instrument that are organized in five major clusters:

1. General education, literature, arts, and social sciences
2. Personal development and social competence
3. Science and technology
4. Intellectual skills
5. Vocational competence

The CSEQ provides space for 20 additional questions that institutions can use for locally developed questions related to assessment of specific first-year programs and initiatives. The additional questions section can also be used as a coding device so that groups can be identified and compared for further analysis. For instance, if an institution wanted to compare the experiences of students in theme housing with those in non-theme housing, the additional questions section might be used to inquire about specific experiences of the two groups. Similarly, the two groups might be coded in the answer spaces provided for question 3, for instance, as "3-A" and "3-B," respectively.

How is Institutional Data Returned?

Institutional users receive a computer diskette that contains the institution's data, as well as a printed report of frequency counts and descriptive statistics. Additional data analyses such as t-tests, ANOVAs, correlations, and sub-group analysis can be performed upon request. Institutions can also request a customized comparison of their data with peer institutions for benchmarking purposes.

In closing, research has indicated that quality of effort is one of the best predictors of the effects of attending college (Ewell & Jones, 1996; Kuh, Pace, & Vesper, 1997). Because it provides an estimate of the contributions students make to their own learning and measures the extent to which students use the resources institutions offer, the instrument is a highly effective tool for helping institutions understand student involvement in, and satisfaction with, college. In sum, the CSEQ can be a highly useful proxy for the value that college students place on their experience and a yardstick by which student involvement in educationally purposeful activities can be measured.

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The Community College Student Experience Questionnaire (CCSEQ)

Patricia H. Murrell

The Community College Student Experience Questionnaire (CCSEQ) (Friedlander, Pace, Murrell, & Lehman, 1990, revised 1999) is a standardized self-report survey instrument that examines the degree of interaction between first-year students and the community college. It gathers information in four areas:

- Amount, breadth, and quality of effort in both in-class and out-of-class experience
- Progress toward important educational outcomes
- Satisfaction with the community college environment
- Student demographic and background characteristics

The instrument is based on the concept that what contributes most to students' progress toward important outcomes of college is not who they are or what they are, but what they do while they are there (Pace, 1984).

At the heart of the CCSEQ is the College Activities section, designed to measure student quality of effort in the use of facilities provided by the institution and experiences with other students, faculty, and staff members at the community college. Respondents indicate the number of times during the current school year they participated in activities that stimulate the development of academic skills and social growth in the following areas:

- Contact with faculty members, other students, organizations, counseling and career centers
- Experiences with writing
- Engagement in classroom activities
- Instruction in study and vocational skills

The 1999 revision incorporates language about the new uses of technology and also adds a new scale devoted specifically to assessing the students' quality of effort in using computer technology.

The items comprising the Quality of Effort Scales require incrementally greater effort; items at the end of the list subsume items at the beginning. Scale scores are computed by summing the scores for items in a group. The higher the score on a scale, the greater the degree of involvement on that scale. The scales measure the following categories of community college participation:

- Course activities
- Library activities
- Faculty-student interaction
- Computer technology
- Student acquaintances
- Art/music/theater activities
- Writing activities
- Science activities
- Career/counseling activities

The Estimate of Gains section of the CCSEQ measures students' self-reported progress in six areas:

- Career preparation
- Arts
- Communication skills
- Mathematics and science
- Technology
- Personal and social development
- Perspectives of the world

Lehman (1991) found strong relationships between several Quality of Effort Scales and Estimate of Gains items, leading her to conclude, "The more effort community college students put into their college experiences, the more likely they are to make personal and academic gains" (p. 19).

Eight questions elicit information about students' perceptions about the nature of their college environment, forming a College Environment scale. These items may be used to form a satisfaction scale to indicate how supportive, helpful, and challenging students find the community college environment.

Results of the CCSEQ are provided to participating community colleges in the form of written reports and on diskette. These include frequency counts and descriptive statistics. Additional analyses are available upon request.

In addition, the *Test Manual and Comparative Data* (Ethington, Cuthrie, & Lehman, 2000), published by the Center for the Study of Higher Education, contains information gathered from over more than 19,000 students who have completed the 1999 revision of the CCSEQ at 40 community colleges. More than 65,000 students at 136 community colleges have completed the instrument since its initial publication in 1990, providing national data for benchmarking.

Information provided by the CCSEQ gives community college administrators and faculty a blueprint for operationalizing theoretical concepts of student involvement and engagement. It places responsibility for the learning on students and holds them accountable for their use of the programs and facilities provided by the institution. It provides valuable information about the interactive processes between students and the institution that is vital if we are to put together the puzzle of institutional impact to enhance the social, academic, and career development of community college students.

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Knowing *How* to Learn is as Important as Knowing *What* to Learn: The Learning and Study Strategies Inventory

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The Learning and Study Strategies Inventory (LASSI, 2nd edition) is based on both cognitive and metacognitive conceptions and models for understanding how we learn, think, and thrive in academic environments, in particular, and learning environments, in general. Cognitive and metacognitive control strategies are all based on three general stages: (a) awareness, (b) reflection, and (c) action/control. In order to be more effective and efficient in achieving academic success, college students need to become aware of what they do (or fail to do) that helps them study and learn in college. However, many students have little or no idea about their strengths and weaknesses as learners. If students do not think they need help succeeding in their studies, they may find it difficult to benefit from a first-year seminar or college learning course. Students must become aware of what they do, think, and believe when they are studying and learning and reflect on where they may need to change or improve. The LASSI helps students gain the awareness they need to benefit from interventions or courses designed to help them become more strategic, self-regulated learners. LASSI results can also be used by instructors and student affairs specialists to target interventions to the particular needs of their students.

What is the LASSI Assessment and What Does it Measure?

The LASSI is a 10-scale, 80-item self-report assessment of students' awareness about and use of learning and study strategies related to skill, will, and self-regulation components of strategic learning. Students respond to each item using a five-point Likert-type scale ranging from "not at all typical of me" to "very much typical of me." The focus is on both covert and overt thoughts, behaviors, attitudes, and beliefs that relate to successful learning and that can be altered through educational interventions. Research has repeatedly demonstrated that these factors contribute significantly to success in college and that they can be learned or enhanced through educational interventions such as a first-year seminar or learning and study skills courses. It can be administered in either an online or a paper-and-pencil format.

The LASSI is designed to simplify administration and scoring as much as possible without losing power or diagnostic information. To help achieve this goal, it uses a self-report format and does not require any special administration procedures, such as

specially trained personnel. The directions are included on the front of each printed booklet so it can be used in both individual and group settings. The web-administered version presents the same directions to each user. The LASSI is not a timed measure, but most students complete it in approximately 15 to 20 minutes. Self-scoring the print version takes approximately 10 minutes.

The LASSI provides standardized scores (percentile score equivalents) and national norms for 10 different scales (there is no total score because this is a diagnostic measure). The LASSI is both diagnostic and prescriptive. It provides students with a diagnosis of their strengths and weaknesses, compared to other college students, in the areas covered by the 10 scales. It is prescriptive in that it provides feedback about areas where students may be weak and need to improve or change their knowledge, attitudes, beliefs, and skills.

Components of Strategic Learning

The Skill Component. The LASSI scales related to the skill component of strategic learning are: (a) Information Processing, (b) Selecting Main Ideas, and (c) Test Strategies. These scales examine students' learning strategies, skills, and thought processes related to identifying, acquiring, and constructing meaning for important new information, ideas, and procedures. The scales also examine how students prepare for and demonstrate their new knowledge on tests or other evaluative procedures.

The Will Component. The LASSI Scales related to the will component of strategic learning are: (a) Attitude, (b) Motivation, and (c) Anxiety. These scales measure students' receptivity to learning new information, their attitudes and interest in college, their diligence, self-discipline, willingness to exert the effort necessary to successfully complete academic requirements, and the degree to which they worry about their academic performance.

The Self-Regulation Component. The LASSI Scales related to the self-regulation component of strategic learning are: (a) Concentration, (b) Time Management, (c) Self-testing, and (d) Study Aids. These scales measure how students manage, or self-regulate and control, the learning process by using their time effectively; focusing their attention and maintaining their concentration over time; checking to see if they have met the learning demands for a class, an assignment, or a test; and using study supports such as review sessions, tutors, or special features of a textbook.

The LASSI Scales

The Anxiety Scale assesses the degree to which students worry about school and their academic performance (sample item: "I feel very panicky when I take an important test."). Students who score low on this scale are experiencing high levels of anxiety associated with school (note that this scale is reverse scored). High levels of anxiety can direct attention away from completing academic tasks. Students who score low on this scale may need to develop techniques for coping with anxiety and reducing worry so that their attention can be focused on the task at hand.

The Attitude Scale assesses students' attitudes and interest in college and academic success. It examines the degree to which their approach to college and academics is facilitative or debilitating (sample item: "I only study the subjects I like."). Students who score low on this scale may not believe college is relevant or important to them and may need to develop a better understanding of how college and their academic performance relates to their future life goals.

The Concentration Scale assesses students' ability to direct and maintain attention on

academic tasks (sample item: “If I get distracted during class, I am able to refocus my attention.”). Low scoring students may need to learn to monitor their level of concentration and develop techniques to redirect attention and eliminate interfering thoughts or feelings so that they can be more effective and efficient learners.

The Information Processing Scale assesses how well students’ can use imagery, verbal elaboration, organization strategies, and reasoning skills as learning strategies to help build bridges between what they already know and what they are trying to learn and remember (sample item: “I try to find relationships between what I am learning and what I already know.”). Students who score low on this scale may have difficulty making information meaningful and recalling it in the future.

The Motivation Scale assesses students’ diligence, self-discipline, and willingness to exert the effort necessary to successfully complete academic requirements (sample item: “When work is difficult, I either give up or study only the easy parts.”). Students who score low on this scale need to accept more responsibility for their academic outcomes and learn how to set and use goals to help accomplish specific tasks.

The Selecting Main Ideas Scale assesses students’ skill at identifying important information for further study from among less important information and supporting details (sample item: “When studying, I seem to get lost in the details and miss the important information.”). Students who score low on this scale may need to develop their skills at identifying important information on which to focus their attention. Tasks such as reading a textbook can be overwhelming if students focus on every detail presented.

The Self-Testing Scale assesses students’ use of reviewing and comprehension monitoring techniques to determine their level of understanding of the information to be learned (sample item: “I stop periodically while reading and mentally go over or review what was said.”). Low-scoring students may need to develop an understanding of the importance of self-testing and learn effective techniques for reviewing information, monitoring their level of understanding, or applying what they are learning.

The Study Aids Scale assesses students’ use of supports or resources to help them learn or retain information (sample item: “I try to find a study partner or study group for each of my classes.”). Students with low scores may need to develop a better understanding of the resources available to them and how to use these resources to help them be more effective and efficient learners.

The Test Strategies Scale assesses students’ use of test-preparation and test-taking strategies (sample item: “I review my answers on essay tests to make sure I have made and supported my main points.”). Low-scoring students may need to learn more effective techniques for preparing for and taking tests so that they are able to demonstrate their knowledge of the subject matter effectively.

The Time Management Scale assesses students’ application of time-management principles to academic situations (sample item: “I find it hard to stick to a study schedule.”). Students who score low on this scale may need to develop effective scheduling and monitoring techniques in order to assure timely completion of academic tasks and to avoid procrastination while realistically including non-academic activities in their schedule.

While the LASSI helps with awareness of students’ strengths and weaknesses as a learner, the reflection and action/control stages of cognitive and metacognitive models need to be addressed by instructional interventions, such as workshops, a first-year seminar or a learning-to-learn course, or the LASSI Instructional Modules. For example, many colleges administer the LASSI at the beginning of first-year seminars so that instruction can be targeted to students’ needs. The LASSI Instructional Modules are web-based instructional units containing approximately three to five hours of instruction in each of the 10 areas assessed by the LASSI.

These modules can be used independently by students, or they can be incorporated into a learning to learn course. For example, we use the modules in our learning-to-learn course so that students have more time for guided practice and feedback in class.



The Retention Management System: Assessing for Early Intervention

*Lana Low &
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Students' experiences during their first few weeks on campus are highly influential. Integrating campus services and proactively reaching out to incoming students, while managing the expectations of college and university life, help incoming students to make the transition successfully.

Institutions with strong retention rates intervene early in the term to foster student success and retention. By front-loading the first term with the appropriate resources, it is possible to unlock the academic potential and the capacity for success that each student brings to campus. In far too many cases, students drop out before the institution is even aware of their needs. With the Retention Management System (RMS), institutions enact prevention plans for individual students early in the term.

The Retention Management System

The primary purpose of the Retention Management System is to foster effective communication between students and their advisors, a purpose that is accomplished by identifying students' needs, attitudes, motivational patterns, resources, coping mechanisms, and receptivity to intervention. More specifically, this proactive approach to student retention is designed to enable institutions to:

- Assess students' needs and strengths
- Identify at-risk students
- Recognize students' motivational patterns
- Use information to implement successful referrals and intervention programs
- Enable advisors to have effective and rewarding contact with students early in the first term

The four basic components of the RMS that enable institutions to assess the motivations of incoming students are:

- The College Student Inventory
- The RMS Advisor/Counselor Report
- The RMS Student Report
- The RMS Summary and Planning Report

The College Student Inventory (CSI)

The History

The College Student Inventory is the foundation of the RMS and was designed especially for incoming first-year students. In 1981, Stratil, the author of the CSI, began research in the area of academic and social motivation with the goals of:

- Creating a coherent framework for understanding human motivation in general
- Identifying the specific motivational variables that are most closely related to persistence and academic success in college
- Developing a reliable and valid instrument for measuring these variables (Stratil, 1988)

As a result of his research, the original version of the CSI (titled the “Stratil Counseling Inventory”) was published in 1984. The current versions of the College Student Inventory—Form A and Form B—were published in 1988 and 2000 respectively, (see figure 1).

Administering the CSI. Students complete the CSI as part of early orientation programs or during the first weeks of classes. Students complete Form A, a 194-item inventory that assesses a variety of motives and background information related to college success, in about an hour. Form B, a 100-item inventory, can be completed in approximately 30 minutes. Both are available in the traditional paper-and-pencil format or online. Canadian and Spanish variations are offered as well.

A number of scales are constructed from the inventory items to provide a detailed view of each student’s motivation, coping ability, and receptivity to assistance. The main categories include:

CSI-Form A	CSI-Form B
Academic Motivation	Academic Motivation
Social Motivation	General Coping Ability
General Coping Ability	Receptivity to Support Services
Receptivity to Support Services	Internal Validity
Initial Impressions	
Internal Validity	

Figure 1. Major Scales for Forms A and B of College Student Inventory.

The Scales

The heart of the CSI rests with the independent motivational scales constructed for each of the categories above. The specific scales for Form A and Form B are listed in Figure 2. The Initial Impressions Scale, included in Form A, focuses on a student’s first impressions of the institution. The Internal Validity scale assesses a student’s carefulness in completing the inventory. This scale enables the institution to determine the care and attention the student gave to the test-taking.

The RMS Advisor/Counselor Report

This report provides information about the student’s attitudes and motivations in percentile ranks. At a glance, advisors can identify the student’s greatest areas of strength and needs. The most distinctive feature of this report (which does not appear on the

student's report) is the Summary of Academic Motivation, which provides a preliminary overview of a student's:

- Dropout proneness
- Predicted academic difficulty
- Educational stress
- Receptivity to institutional help

In addition to the Summary of Academic Motivation, seven specific recommendations for each student are listed on this report, ranging from suggestions to "get help with writing skills" to "discuss emotional tensions with a counselor." The strength of each recommendation is indicated by its priority score.

The motivational scales are reported in two ways: as a percentile rank and with a bar graph. With CSI Form A, background information about the student's high school academics, non-credit activities, family, and admissions test scores are also included in the profile.

ACADEMIC MOTIVATION	
Form A	Form B
Study Habits	Study Habits
Intellectual Interests	Intellectual Interests
Academic Confidence	Verbal Confidence
Desire to Finish College	Math Confidence
Attitude Toward Educators	Desire to Finish College
	Attitude Toward Educators
GENERAL COPING ABILITY	
Form A	Form B
Family Emotional Support	Family Emotional Support
Sense of Financial Security	Sense of Financial Security
Openness	Opinion Tolerance
Career Planning	Career Closure
Ease of Transition	Sociability
RECEPTIVITY TO SUPPORT SERVICES	
Form A	Form B
Academic Assistance	Academic Assistance
Personal Counseling	Personal Counseling
Social Enhancement	Social Enhancement
Career Counseling	Career Counseling
	Financial Guidance
SOCIAL MOTIVATION	
Form A	
Self-Reliance	
Sociability	
Leadership	

Figure 2. Components of major scales for Forms A and B of College Student Inventory.

The RMS Student Report

The RMS Student Report is intended to give students insight into their own strengths and potential areas of need. It explains student's scores on each scale and is designed to encourage and guide. This report parallels the RMS Advisor/Counselor Report but omits the Summary of Academic Motivation.

The RMS Summary and Planning Report

This report provides significant planning data and specific contact lists that name the students with needs in specific areas. Some key lists included in this report are:

- Dropout proneness
- Receptivity to institutional help
- Need for academic assistance
- Need for personal counseling
- Need for career counseling
- Need for social enhancement

How are Institutional Data Returned?

Online web links to the RMS Advisor/Counselor Report, the RMS Student Report, and the RMS Summary and Planning Report are provided to campus coordinators. Raw and translated data are also available online for institutions that wish to perform further analyses of their data.

Conclusion

Encircling your students with services during their first few weeks on campus may be the most effective strategy for enhancing student success and strengthening student retention. Hundreds of campuses nationwide find that early assessment of affective needs provides the foundation for timely and relevant intervention with their incoming class.

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The Study Behavior Inventory

Leonard B. Bliss

The Study Behavior Inventory (SBI) is a computerized, 46-item, self-report, diagnostic/prescriptive survey that is the result of more than 10 years of research, development, and refinement. The instrument, which self-administers in approximately 15 minutes, probes the study behaviors of college and university students and diagnoses behaviors that may result in their encountering academic difficulties so that students can receive appropriate remediation in these areas. After administering the SBI to more than 10,000 college and university students in a series of studies geared toward developing and standardizing the instrument, we believe we know a great deal about the connection between study behaviors and study skills.

Distinguishing Between Study Behaviors and Study Skills

Study behaviors are those actions students carry out when engaged in preparation for academic tasks. While the terms “study behaviors” and “study skills” have often been used synonymously—and this has caused more than a little confusion—there is a clear distinction between the two concepts. *Study skills* represent the potential for action while *study behaviors* are the actions themselves. A student may have all the skills required—that is, he or she may be able to take good notes in class (possession of a study skill)—but may doodle in class (poor study behavior). This distinction is not trivial. Students are often placed in college and university developmental education programs because high school grades, admissions tests, and placement tests suggest they do not use appropriate study behaviors (i.e., they do not take adequate notes; they do not use the library efficiently; they do not use study time well). We assume students do not exhibit *study behaviors* because they do not possess the appropriate *study skills*. Thus, these programs often focus on activities designed to develop skills such as note-taking skills, library-use strategies, and time-management ability. Yet, this assumption may be erroneous and unjustified. Often, these students do possess study skills but do not use them when preparing for academic work in college and university classrooms.

The Underlying Concepts of the SBI

The SBI is composed of 46 statements to which subjects respond on a four-point scale indicating how often a particular

statement might apply to them. Specifically, the response choices are (a) “rarely or never,” (b) “sometimes,” (c) “often or usually,” or (d) “always or almost always.” Student respondents are instructed to attempt to answer all items and to work until they have completed the instrument. Scores are coded so that positive responses (those indicating appropriate study behaviors) are coded high, while negative responses are coded low.

A series of factor analytic studies consistently yielded three factors underlying study behaviors as measured by the SBI. This factor structure was found in samples from varying locations in the United States, at community colleges and four-year institutions, and even in a Spanish-language edition (still under development) given to university students in four Latin American countries. Factor 1 deals with feelings of insecurity, efficacy as a student, and with levels of competitiveness in students when they approach academic tasks. Factors 2 and 3 include behaviors related to the appropriate use of time. Factor 2 behaviors concern routine academic tasks such as doing assignments and preparing for classes. Factor 3 addresses behaviors dealing with long-range planning such as studying for examinations and the preparation of papers and other long-term projects.

Factor 1: Academic Self-efficacy

The connection between the belief about self and behavior is classic and well documented. The Humanist, or Phenomenologist, psychologists of the 1960s and 1970s took this idea and made it a centerpiece of their therapeutic and educational strategies. Combs and Snygg (1959), note in their seminal book that, “What is perceived is not what exists, but what one believes exists...what we have learned to perceive as a result of our past opportunities and experiences” (pp. 84-85). Further, people’s perceptions of themselves and their abilities are the determinants of their behavior (Patterson, 1973). It follows from this that students who perceive themselves as academically incompetent and helpless due to past academic experiences may determine that it is useless to try to excel academically. We believe that academic self-efficacy, as measured in the first factor of the SBI, is the mediator between study skills and study behaviors. That is, a study skill will be used (i.e., will result in a study behavior) if students believe there is some chance they will be successful. An example of this is the student who knows all about using the library, its indexes, and catalogues (a study skill), but is so certain that any paper he or she writes will receive a failing grade, that he or she does not bother to use the library to complete a written assignment (a study behavior). Examples of SBI items that make up this factor include the following:

1. I have to reread material several times; passages do not have much meaning the first time I go over them.
2. I get nervous and confused when taking an examination and fail to answer questions to the best of my ability.
3. During an examination, I forget names, dates, formulas, and other details I really do know.

Factor 2: Time Management for Preparing for Routine, Short-term Academic Tasks

This second factor underlying study behavior probes how students go about preparing for routine, everyday tasks. Such tasks include reviewing class notes before the next class meeting, doing assigned readings between class meetings, and completing homework assignments. Items in this factor include:

1. I keep my assignments up to date by doing my work regularly from day to day.
2. After a class lecture, I go back and recite to myself the material in my notes, rechecking any points I find doubtful.
3. Before attending class, I prepare by reading or studying the assignments.

Factor 3: Time Management for Preparing for Specific, Long-range Academic Tasks

Finally, the third factor deals with behaviors that students exhibit when they are planning and carrying out specific, long-range academic tasks such as writing papers and studying for examinations. These activities involve planning over long periods of time and do not occur on a regular, day-to-day basis. Questions in this factor include:

1. I find it hard to finish work by a certain time; work is unfinished, inferior, or not on time.
2. When preparing for an examination, I learn facts in some logical order of importance, order of presentation in class or textbook, order of time in history, etc.

Scoring the SBI

The SBI is fully computerized, completely networkable, and self-scoring. In a matter of seconds, respondents receive a hard copy of results that gives raw and percentile scores for the total instrument and for each of the three underlying factors. The package comes with a built-in set of recommended interventions, but user institutions can add their own specific sets of recommended interventions to the system by using the set-up programs that are included.

Psychometric Properties

The SBI was normed using a sample of more than 5,200 English-speaking college and university students in the United States. The standardization sample is representative by geographic area and type of institution (public and private, two-year and four-year).

Validity. The factor structure obtained in the studies involving the development of the SBI is consistent with the educational and psychological theories upon which the instrument was based. (See the articles in the bibliography section for details of this theoretical base.) Additional evidence of the construct validity of the instrument is that the correlation between the total SBI score and the grade point average of survey respondents in the semester prior to their taking the inventory was .79. The correlations with Factors 1, 2 and 3 were .74, .70, and .67, respectively. Correlations with ACT on SAT total standard scores were .68 on the total score, and .65, .61, and .58 for the scores on the three factors. No differences between the scores of men and women were found on the total score or on any of the factor scores.

Reliability. Cronbach's alpha for the scores on the three factors were .86, .82, and .70. These measures indicate high levels of internal consistency for the scores on each factor.

Conclusion

Currently, more than 300 institutions of higher education in the United States and in other English-speaking countries use the SBI. The instrument is a Windows-based package that includes a database management system, allowing scores of individual respondents

to be saved and statistically manipulated. The inventory can be loaded onto individual computers or networked throughout an institution. Unlike similar instruments, institutions receive a site license that permits them to install the SBI on as many computers as they wish or to network the inventory throughout the institution. There are no additional charges for individual administrations. Excellent technical support is available by e-mail or by telephone. Paper copies of the instrument are available for mass administrations that can then be scored using the computerized instrument.

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The College Success Factors Index

*Edmond C. Hallberg
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For years, counselors have discussed the existence of a second curriculum in higher education—a curriculum that is essential for academic success. This is an affective curriculum—composed of habits, attitudes, and behaviors—that not only contributes to scholastic performance, but serves as its foundation. This foundation we have called *academic aptitude*.

Research in the field of academic values (including our own) has identified about 25 possible factors related to academic aptitude. Factors in a student's life such as family involvement, time management, assertiveness, and responsibility have been shown to be important indicators of success. Each one of these had merit, but after 15 years of working with 140 colleges and 20,000 students, eight areas of academic aptitude emerged, which we believe are the key foundational factors of college success. These eight factors are measured in the College Success Factors Index.

Eight Factors of Academic Aptitude

Responsibility/Control

College success is often measured by a process requiring a gradual increase in responsibility year by year and an acceptance by the student that he has increasing control over his academic success. Understanding and meeting these responsibilities is an important predictor of success in college. Taking responsibility for one's success must be coupled with taking control. Knowing expectations and taking the necessary control to meet them may be two different things, as are perceived effort and actual performance.

Competition

The need to compete is natural to most of us. Our society is individualistically oriented, rewarding those who excel beyond their peers. Getting an "A" on a test represents this phenomenon, as does further committing to and excelling in extracurricular activities. Astin (1984) found both content and resources approaches to pedagogy tend to favor academically prepared, assertive students and that a passive approach to learning may be indicative of a lack of involvement.

Task Precision

College success is partially defined by producing a series of class projects or tasks. Lower achievers lack persistence and conscientiousness in study skills, which may translate to reduced task precision. Some researchers feel the learning environment must receive sufficient student effort and investment of energy to bring about the desired learning and development (Tinto, 1993).

Expectations

Success in school is also generated by one's own expectations to discover new and challenging experiences. This seeking is combined with setting one's own discovery course, instead of merely "taking in" what is offered by instructors. Successful students have their own goals and expectations related to assignments, areas of study, and future careers (Lunneborg & Lunneborg, 1976). Attaining goals and expectations and a relative posture towards knowledge development appears a necessary characteristic to success.

Wellness

Behavioral symptoms such as constant stress, sleeplessness, poor nutrition, or depression are often a deterrent to college success. Depression, anxiety, and stress have been known to impede school and college success; and burnout appears important as a factor in student attrition (Hallberg, Levitt, & Hallberg, 1984).

Time Management

From being on time to using one's time efficiently, time tends to be an ingredient in how successful students will be in college. Planning ahead and determining time constraints in completing assignments successfully is important in a highly technical culture. "Getting my work in on time" has a direct bearing on grades and graduation.

College/School Involvement

A strong correlation has been found between college involvement and success. College involvement can be characterized in several ways, such as living on campus or having part-time campus jobs (Astin, 1993), having friendship support, taking part in extracurricular activities, and interacting with college faculty. Campus involvement on the part of the student not only relates to academic success but also to identity achievement and to general satisfaction with the academic experience.

Family Involvement

Family encouragement of the first-year college student and/or participation of one's family in college appears to be an important factor in the student's success in college. Graduates of universities note that their families "just assumed" they would graduate. Early research suggested that persistent college students received more parental advice, praise, and expressed interest (Trent & Ruyle, 1965).

Measuring Academic Aptitude

The College Success Factors Index (CSFI) is an assessment instrument containing 80 self-scoring statements designed to determine the readiness of high school juniors/seniors and college populations to complete their early years of college successfully. The following 10 statements are samples from the CSFI. Students are asked to agree or disagree with each statement on a five-point scale: "Strongly Agree" to "Strongly Disagree." They are also asked to respond as honestly as possible.

- I can handle examination stress.
- I involve myself with a lot of school or college projects.
- People should stand up for what they believe.
- Competition at college is necessary for success.
- I know why my career choice requires a college degree.
- I rarely feel that I am merely drifting along.
- I always make time for my studies.
- I like a class assignment that is challenging.
- In group projects, I am often a leader.
- My family will definitely attend my graduation.

Scoring the CSFI

The test can be self-scored or on a same-day basis offering individual printouts within hours. The printout includes the student's total and sub-test scores and a bar chart to assist the student/counselor/instructor in understanding areas that are good, average, or need improvement. Scores below the statistical average fall below a so-called "watchline" or danger zone. Thus, students, counselors, and instructors have a visual indicator of strengths and weaknesses in the eight vectors of academic aptitude.

Technical Background

The technical data of the CSFI is very encouraging in terms of reliability and validity. The norm group has continued to expand over the years, and we now have 20,000 students representing research universities, state universities, community colleges, and private colleges. The mean scores for these norm groups have not varied more than .02% during the last eight years. Culture diversity studies were modeled after the diversity found in California college students. Checks over the last few years indicate initial footprints have been maintained in the growing norm group.

Coefficient alpha and test-retest studies indicate coefficients of .91, which are at a very acceptable level of reliability. Validity studies, both concurrent and predictive, with a variety of students indicate coefficients of from -.30 to -.50, very desirable results for self-reporting instruments. (Negative signs indicate smaller scores and represent greater success). Coefficients were drawn between test scores and earned GPA.

Using the CSFI

Three versions of the CSFI are available:

1. *CSFI booklets*: Students fill in their responses in paper booklet. The booklet

- is self-scored, and the profile is provided in each booklet for the individual student and counselor/instructor.
2. *PC software for Windows*: Large numbers of students can take the CSFI, using a reusable test booklet and a scan form.
 3. *CSFI online*: In association with Wadsworth Publishing, the CSFI is available on the Internet. Students can take the test using a computer at home or on campus. The test scores are printed out instantly with a bar chart and explanations for the eight factors.

The Early Alert Retention Program allows colleges to identify high-risk students by name and CSFI watchline factor. Counselors and faculty interested in retention rates can use this program to assign FYE and intervention classes.

Once a student's weaknesses have been identified by the CSFI, the instructor must be able to offer guidance concerning improvements. The eight vectors of academic aptitude naturally suggest certain remedies: Students with poor responsibility scores need assertiveness training, just as those with poor scheduling skills need time-management training, and so forth. Instructors can offer their own interventions with the test, but the CSFI is designed to be used with a complete curriculum of improvements. The curriculum is based on a book, *Making the Dean's List* (Hallberg, Achieris, & Hallberg, 2003), which includes 200 transparency-ready lessons and exercises. It is also available with a PowerPoint presentation for instructors. These presentations can be used as a 16-week total student development course or a single class module for instructors in a variety of subjects.

Linking the CSFI to institutions includes programs in student development classes, college orientation, cohort classes, probation seminars, individual counseling, parent/spousal orientation, classroom subject orientation, Educational Opportunity programs, high school and college Early Alert programs, and special population interventions such as nursing and research.

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The National Survey of Student Engagement: Benchmarks of Effective Educational Practice

John Hayek

A common question among those responsible for assessing first-year students and first year of college programs is “How do our students and programs compare to other institutions?” One way to answer this question is through benchmarking. Benchmarking is the process of continuously comparing and measuring an institution against high performing colleges and universities to help the institution take action to improve its own performance (Alstete, 1995). As it relates to the first year of college, benchmarking is adapting best practices to improve the quality of the first-year experience.

Effective benchmarking does not happen by solely comparing resources, reputation, or incoming student background characteristics. Although this kind of information reveals some useful facts about an institution, it does not tell us much about what is important to student learning—whether or not an institution’s programs and services are having the desired effect on students’ activities, experiences, and outcomes. The National Survey of Student Engagement (NSSE) was designed with these purposes in mind.

What is NSSE? (pronounced “nessie”)

Now in its third year, NSSE is a national effort to assess collegiate quality by collecting reliable, valid information about students’ engagement in good educational practices directly from undergraduates at four-year colleges and universities. NSSE is supported by a grant from The Pew Charitable Trusts and co-sponsored by The Carnegie Foundation for the Advancement of Teaching and The Pew Forum on Undergraduate Learning.

The NSSE instrument, The College Student Report, is administered each spring to random samples of first-year and senior students at public and private four-year colleges and universities. It can be completed via a traditional paper questionnaire or via the web. The random sampling method ensures that the results are comparable, meaningful, credible, and usable for institutional self-study and improvement efforts, as well as peer comparisons and national benchmarks.

Unlike many other assessment surveys which require expending a great deal of time, effort, and resources administering the survey and then figuring out what the results mean, NSSE is a “full service” survey and assessment provider.

NSSE handles the sampling and all aspects of data collection, including mailing surveys directly to students; collecting, checking, and scoring completed surveys; conducting multiple follow-ups with non-respondents; and generating customized assessment and benchmarking reports that are distributed to participating colleges and universities. NSSE reports include a customized institutional profile that includes averages and response frequencies on all survey items, aggregated comparison data for both similar colleges and national norms, and a special institutional comparison against NSSE's national benchmarks.

National Benchmarks of Effective Educational Practice

To help facilitate institutional benchmarking, The College Student Report focuses on effective educational practices by assessing student engagement in five key areas.

1. *Level of academic challenge.* Survey items in this benchmark include time spent preparing for class, amount of reading and writing, and institutional expectations for academic performance.
2. *Active and collaborative learning.* Survey items in this benchmark include participating in class, working collaboratively with other students inside and outside of class, tutoring and so forth.
3. *Student-faculty interaction.* Survey items in this benchmark include talking with faculty members and advisors, discussing ideas from classes with faculty members outside of class, getting prompt feedback on academic performance, and working with faculty members on research projects.
4. *Enriching educational experiences.* Survey items in this benchmark include interacting with students with different racial or ethnic backgrounds or with different political opinions or values; using electronic technology; and participating in such activities as internships, community service, study abroad, co-curricular activities, or a culminating senior experience.
5. *Supportive campus environment.* Survey items in this benchmark include the extent to which students perceive the campus helps them succeed academically and socially; assists them in coping with non-academic responsibilities; and promotes supportive relationships among students and their peers, faculty members, and administrative personnel and offices.

These benchmarks capture key elements of college student engagement that research studies show to be important to student learning (Astin, 1993; Chickering & Gamson, 1987; Pascarella & Terenzini, 1991). National norms for these five benchmarks are based on responses of students from nearly 500 different institutions. It is important to note that NSSE provides the benchmark data to participating institutions and then it is up to institutional representatives to initiate the "benchmarking" process at their respective colleges and universities.

Using NSSE Data

NSSE generates a number of user-friendly reports that can be immediately used and disseminated on campus to stimulate or focus conversations on the first year of college experience. Colleges and universities are using NSSE results in a number of ways:

- *Assessment and institutional improvement.* As a diagnostic tool to identify areas in which the college or university can enhance effective educational practices and promote student learning
- *Benchmarking.* As a frame of reference for comparing student performance among institutions with similar missions and academic programs, and for establishing national and sector norms of effective educational practice
- *Internal and external accountability.* As a way of documenting changes in institutional effectiveness over time for accreditation, self-studies, and other purposes
- *Institutional research.* As a source of information about students that can be directly linked with institutional records and results from other surveys to generate a more comprehensive picture of the undergraduate experience

In addition, many campuses are putting NSSE data to use as it relates to the first-year experience. Examples include incorporating NSSE indicators into the evaluation of first-year learning communities, using NSSE data to assist with enrollment management and retention issues, incorporating NSSE into discussions related to academic advising, using NSSE data to assess general education requirements, and using NSSE to help establish student and faculty expectations related to student engagement in the first year of college. Additional examples of how NSSE is being used are included in Kuh (2001).

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Benchmarking Effective Educational Practice in Community Colleges

Kay M. McClenney

The Community College Survey of Student Engagement (CCSSE) and The Community College Student Report, which reports its results, focus on institutional practices and student behaviors that demonstrate student engagement—and that research shows correlate highly with student learning and retention. In spring 2003, 65,300 students responded to the survey, which is administered in randomly selected credit classes at CCSSE member colleges. Details about the member colleges, student respondents, and results, as well as the survey sampling and administration process are made public at www.ccsse.org/.

CCSSE'S 2003 Benchmarks

CCSSE has introduced a set of five benchmarks of effective educational practice in community colleges. The benchmarks provide significant opportunities for community colleges to gauge and monitor their performance in areas that are central to their mission and focus on teaching and learning. In addition, participating colleges can make appropriate and useful comparisons between their performance and that of similar colleges. The benchmarks encompass 38 engagement items from the CCSSE survey, which address many of the more powerful contributors to effectiveness in teaching, learning, and student retention. They include:

- Active and collaborative learning
- Student effort
- Academic challenge
- Student-faculty interaction
- Support for learners

What are Benchmark Scores?

Benchmark scores provide a useful way to look at an institution's data by creating groups of conceptually related items that address key areas of student engagement. Using empirical results of factor analytic models and with the help of its Technical Advisory Panel, CCSSE grouped together survey items related to each of the five areas described above. In order to establish the benchmark scores, the items associated with a benchmark are first rescaled so that all items are on the same scale (0 to 1). Then the scores are standardized so that respondents' scores have a mean

of 50, weighted by full- and part-time attendance status, and a standard deviation of 25. Benchmark scores are then computed by averaging the scores on the associated items.

Descriptions of CCSSE Benchmarks

Active and Collaborative Learning

Students learn more when they are actively involved in their education and have opportunities to think about and apply what they are learning in different settings. The seven survey items that contribute to this benchmark include:

During the current school year, how often have you:

- Asked questions in class or contributed to class discussions
- Made a class presentation
- Worked with other students on projects during class
- Worked with classmates outside of class to prepare class assignments
- Tutored or taught other students (paid or voluntary)
- Participated in a community-based project as a part of a regular course
- Discussed ideas from your readings or classes with others outside of class (students, family members, co-workers, etc.)

Student Effort

Students' own behaviors contribute significantly to their learning and the likelihood that they will successfully attain their educational goals. Associated with this benchmark are eight survey items indicating student behavior in these terms:

During the current school year, how often have you:

- Prepared two or more drafts of a paper or assignment before turning it in
- Worked on a paper or project that required integrating ideas or information from various sources
- Come to class without completing readings or assignments (reverse coded)
- Used peer or other tutoring
- Used skill labs
- Used a computer lab

During the current school year:

- How many books did you read on your own (not assigned) for personal enjoyment or academic enrichment?
- How many hours did you spend in a typical week preparing for class (studying, reading, writing, rehearsing or other activities related to your program)?

Academic Challenge

Challenging intellectual and creative work is central to student learning and collegiate quality. Ten items from The Community College Student Report correspond to components

of academic challenge including (a) the nature and amount of assigned academic work, (b) the complexity of cognitive tasks presented to students, and (c) the standards faculty members use to evaluate student performance. These items are:

During the current school year, how often have you:

- Worked harder than you thought you could to meet an instructor's standards or expectations

How much does your coursework at this college emphasize:

- Analyzing the basic elements of an idea, experience, or theory
- Synthesizing and organizing ideas, information, or experiences in new ways
- Making judgments about the value or soundness of information, arguments, or methods
- Applying theories or concepts to practical problems or in new situations
- Using information you have read or heard to perform a new skill

During the current school year:

- How many assigned textbooks, manuals, books, or book-length packs of course readings did you read?
- How many papers or reports of any length did you write?
- To what extent have your examinations challenged you to do your best work?

How much does this college emphasize:

- Encouraging you to spend significant amounts of time studying

Student-Faculty Interaction

The more contact students have with their teachers, the more likely they are to learn effectively and to persist toward achievement of their educational goals. Personal interaction with faculty members strengthens students' connections to the college and helps them focus on their academic progress. The six items used in this benchmark are:

During the current school year, how often have you:

- Used e-mail to communicate with an instructor
- Discussed grades or assignments with an instructor
- Talked about career plans with an instructor or advisor
- Discussed ideas from your readings or classes with instructors outside of class
- Received prompt feedback (written or oral) from instructors on your performance
- Worked with instructors on activities other than course work

Support for Learners

Students perform better and are more satisfied at colleges that are committed to their success and cultivate positive working and social relationships among different groups on campus. Community college students also benefit from services targeted to assist them with academic and career planning, academic skill development, and other issues that may affect both learning and retention. The seven survey items contributing to this benchmark include:

How much does this college emphasize:

- Providing the support you need to help you succeed at this college
- Encouraging contact among students from different economic, social, and racial or ethnic backgrounds
- Helping you cope with your non-academic responsibilities (e.g., work, family)
- Providing the support you need to thrive socially
- Providing the financial support you need to afford your education

During the current school year, how often have you:

- Used academic advising/ planning services
- Used career counseling services

Using the Benchmarks

There are a number of ways that college leaders might choose to use the benchmarks. In doing so, it is important to keep in mind that community colleges differ significantly—even dramatically—from one another on variables including size, location, resources, enrollment patterns, and student characteristics. It is important to take these differences into account when interpreting benchmark scores—especially when making institutional comparisons.

These benchmarks are tools that community colleges can use to:

- Convert data into useful information
- Compare their performance to that of similar institutions, to the aspirations of their own faculty and staff, and to the full CCSSE population of community colleges
- Compare their own performance across benchmarks
- Identify areas in need of improvement and monitor the effects of improvement initiatives
- Track their progress toward identified institutional goals

Because the results are public, benchmarks also can stimulate conversation—within colleges and among policy makers—about effective education practice.



What Matters in First-Year Seminars

Randy L. Swing

The First-Year Initiative (FYI) benchmarking survey measures learning outcomes from first-year seminars and guides improvement of these courses. The FYI instrument and assessment procedures were developed through a partnership between the Policy Center on the First Year of College and Educational Benchmarking, Inc. with funding from The Pew Charitable Trusts and The Atlantic Philanthropies. The launch of FYI in 2000 is a signal of the changing focus in developing first-year seminars. During the last decades of the 20th century, much of the focus of higher education was on establishing first-year seminars at colleges and universities. National surveys show that most colleges and universities now have established some form of first-year seminar. The challenge for the new century is to improve the effectiveness of these courses to ensure the greatest achievement of course goals. Continuous evaluation of course outcomes and evolution of course content and pedagogy will likely be needed to adjust seminars to the changing needs of new students.

FYI is administered to first-year students in the last week of their first-year seminar. The survey measures 15 constructs—built as statistically validated factors. Ten of the measures evaluate learning outcomes from first-year seminars, especially about the impact on other courses in which students are also enrolled. In addition, the instrument measures three constructs about the delivery of the seminar and two additional measures about the student's overall satisfaction with the institution.

Course Learning Outcomes

- Study strategies
- Academic/cognitive skills
- Critical thinking
- Connections with faculty
- Connections with peers
- Out-of-class engagement
- Knowledge of campus policies
- Knowledge of wellness/spirituality
- Managing time/priorities
- Knowledge of wellness

Assessment of Seminar Delivery and Effectiveness

- Usefulness of course readings

- Presence of engaging pedagogy
- Overall course effectiveness

Satisfaction with Institution

- Satisfaction with college/university
- Sense of belonging/acceptance

Unlike most end-of-course, locally-produced “teacher/course evaluations,” The FYI survey instrument was developed by experts in first-year seminars and pilot tested with more than 2,000 students. The centerpiece of an FYI study is not the instrument itself. In other words, the instrument is not designed to judge the performance of a single seminar section or instructor in isolation. Rather, FYI is designed to offer a context for assessment data by providing comparisons with outcomes from similarly situated courses in two ways.

First, institution-level data are compared with data from six selected “peer” institutions. These institutions closely match in terms of institutional characteristics and course formats. The use of peer institutions ensures that comparisons are “apples to apples.” For example, the outcomes from a one contact-hour course would not be expected to be the same as the outcomes from a three contact-hour course, so the only useful comparison would be between seminars using the same number of contact hours.

Second, data are also analyzed within each participating institution so that the outcomes from each section are compared with outcomes from all other sections. In this case, the benchmarks are between sections rather than between institutions. This analysis allows course administrators to identify high-performing sections and to learn from the organization and delivery structures used in those sections.

A psychometrically sound instrument and appropriate data context are necessary but not sufficient components of a successful course assessment strategy. In addition to these elements, the survey process must identify which course factors have the greatest impact on overall effectiveness on the first-year seminar. The FYI benchmarking study can produce a decision matrix created through a sophisticated data analysis model to identify the highest impact factors. The decision matrix is a 2 x 2 table which plots the level of achievement of each factor and its level of importance in overall course effectiveness (Figure 1).

The decision matrix conforms to the qualities of good assessment noted earlier in this monograph in that it provides confirmation of existing practices which are working well and identifies areas where improvement would have the greatest positive impact. These data and the decision matrix are particularly useful in increasing the impact of first-year seminars on average—the first concern of seminar directors. But if seminars are to fulfill their promise of serving all students, it is equally important to be able to disaggregate seminar evaluations by a variety of student characteristics.

Because FYI serves as a course evaluation the instrument does not collect student names or identifiers to ensure that students feel completely free to state their honest opinions. Without individual student identifiers the FYI data cannot be linked to other existing data sources, so demographic characteristics of interest must be collected on the FYI survey instrument. The demographic data collected by FYI may be used to disaggregate course results so as to establish the course’s impact on subgroups of students within each demographic stratum. Demographic data include:

- Gender
- SAT/ACT score

- Ethnic group
- Age
- High school grade point average
- First-term grades in other courses
- Source of financial aid
- Time spent studying/working/participating in campus events per week.
- Living arrangements (on/off campus)
- Use of alcohol

Low Factor Scores	High Factor Scores
High Level of Impact on Course Effectiveness (Improvement in these factors will have the greatest positive impact on the course.)	High Level of Impact on Course Effectiveness (These factors are having a positive impact on the course and should be maintained.)
Low Factor Scores	High Factor Scores
Low Level of Impact on Course Effectiveness (Improvement in these factors will have little positive impact on the course.)	Low Level of Impact on Course Effectiveness (There is little room for improving these factors, and improvement would have little positive impact on the course.)

Figure 1. Decision Matrix for FYI

Disaggregating FYI data by any specific demographic variable can be helpful—for example determining if men and women are having similar experiences in first-year seminars would be of interest to most seminar administrators. Demographics analyses are of greater importance when several variables are combined to disaggregate the findings further. For example national data suggest that even among female students, the seminar may be differently perceived by specific ethnic (e.g., Hispanic, White, African American), age, and ability groups (i.e., based on high school grades or SAT/ACT scores).

Conclusion

FYI has a number of advantages over most locally produced, end-of course evaluations. The external validation of the instrument gives it credibility and increases the possibility that findings will be taken seriously. The advantages go beyond the survey instrument itself. An FYI survey is particularly capable of producing change because the data are presented in an appropriate context—either through comparison with findings from peer institutions or via comparisons across sections of the course within a single institution. Because participating institutions receive the raw data from the FYI study, it is possible to focus analyses on a large range of student subpopulations which are of local interest.



Looking at High-Risk Behaviors

John Pryor

Increased alcohol use and the accompanying negative consequences of such use have powerful impacts on the first-year experience. Even if a student is not one of those who, according to the most recent study from the Harvard School of Public Health (Wechsler, Lee, Kuo, Seibring, Nelson, & Lee, 2002), is missing class as a result of drinking the night before (30%) or blacking out (27%), he or she is probably one of those whose sleep or studying is being interrupted by drinkers (60%) or who is having to baby-sit friends who have had too much to drink (48%).

The above figures from the Harvard study are from a nationally representative dataset and usually show great variability from campus to campus. National statistics are helpful in determining how your campus compares to others; but because each campus climate is unique, one cannot assume that a national problem is also a local problem. With limited resources for education and prevention, it makes sense to target those resources on specific issues that are demonstrable problems. For example, a well-designed survey might reveal that key issues for a particular campus are impaired driving or inadequate training of bartenders on recognizing signs of intoxication. Thus, resources for alcohol and drug education might be directed toward these issues.

There are many valid reasons to survey first-year students about high-risk behaviors. Surveying students as they enter college helps institutions better separate pre-college experiences from college experiences and to program accordingly. Surveying your first-year students as part of an ongoing assessment of all classes (e.g., a representative sample of all students in the spring term) will help illuminate how substance use and other high-risk behaviors change as students pass through college.

A number of instruments are available for examining patterns of alcohol/drug use and other high-risk behaviors among college students. Institutions also have the option of creating their own. A locally developed instrument ensures that particular institutional concerns are addressed and is more likely to reflect the unique institutional culture, but an effective instrument can be very difficult to develop and should not be tackled by a novice. A good reason to use the available instruments is that they allow institutions to compare their students' responses with national norms, and this might not be possible with a locally grown survey.

The Core Alcohol and Drug Survey was very popular in the 1980s and 1990s, mostly because of its roots in and promotion by

the U.S. Department of Education's Fund for the Improvement of Post Secondary Education (FIPSE) alcohol branch. It is an inexpensive and low-tech effort to examine alcohol and other drugs and their effects. The Core is available for paper and pencil administration only. Participating institutions order copies of the Core survey from the Core Institute and administer the survey themselves and mail in the completed instruments. Several months later the institution receives a frequency report of the responses and can also request an executive summary of the responses, cross-tabulations on several key demographic variables (e.g., sex, race, age), and a computer file containing the unit-record responses.

More schools are recognizing the need for broader assessment now and are using instruments that include sexual behavior, eating behavior, violence, and other areas of risk for college students beyond just alcohol and other drugs. The American College Health Association developed the National College Health Assessment (www.acha.org/projects_programs/assessment.cfm) as a comprehensive health survey for college students. The survey includes alcohol, tobacco, and other drugs, but also covers sexual health, mental health, injury prevention, nutrition, and other areas. It is available in both paper-and-pencil and web versions. The paper-and-pencil forms are machine scannable and are mailed to a central source to be scanned. Several months later participating institutions will receive a frequency list and an executive summary and can request a data file and a reference group report.

TheHealthSurvey is another comprehensive survey for college students, examining alcohol, tobacco, and other drugs as well as sexual behavior, eating behavior, violence and safety, suicide, and use of campus education, prevention, and counseling sources, among other topics. While there is overlap with the topics covered in the NCHA, the emphasis in TheHealthSurvey is less on issues of general health (such as injury prevention and what vaccinations the student has received, as in the NCHA) and more on areas of college student risk. A unique feature of TheHealthSurvey is an optional "Social Marketing" evaluation component. This feature allows schools to provide graphic files of social marketing materials (such as a "social norms" poster) that will be embedded in the web-based questionnaire in order to obtain feedback from students. TheHealthSurvey was designed exclusively for Internet-based administration and is not available in a paper version. Institutions provide student e-mail addresses to the company that created the survey, which administers the survey to students. E-mail addresses are kept confidential and are erased after the survey project is completed. The turn around time for TheHealthSurvey is shorter than the previous two surveys examined, often about a month from the end of the survey until the reporting is received. Participating institutions receive a frequency list and the unit-record data in SPSS format. They can also choose from a menu of other reporting options, including a PowerPoint presentation of their data, an extensive list of crosstab options for sub-group reporting, an executive summary, and customized analyses.

One of the more well-known alcohol surveys is the Harvard School of Public Health survey. This nationally representative study is frequently quoted in the media, and 130 campuses across the country have participated in this research project. Until recently, the survey was available only to the institutions involved in the study. Now, researchers at the Harvard School of Public Health have created a comprehensive health survey, based on the College Alcohol Study, called the Study of College Health Behaviors (<http://www.hsph.harvard.edu/cas/chb/>) and scheduled to be released in spring 2004. Promotional materials suggest that the instrument will closely resemble the NCHA topics.

The cost to participate in these survey projects varies considerably. Because of the many options available, such as paper versus web administration, how many follow up contacts one initiates, and the various reports, it is difficult to put a specific number on

each survey package. In general terms, however, the Core survey is the least expensive option, the NCHA and TheHealthSurvey are in the moderate category, and the Study of College Health Behaviors is in the expensive category. Specific information is available at each project web site.

In summary, surveying first-year students helps campuses identify the presence of high-risk health behaviors associated with attrition and academic failure. Various instruments are available to help campuses explore these issues, with the field moving toward a more comprehensive health survey that is administered over the Internet. Each instrument has its own strengths and should be assessed individually by each campus with respect to the most appropriate questions for particular campus culture and concerns, budget, and format.

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A More Precise Approach to Assessing Student Satisfaction

Julie L. Bryant

Successful institutions share three basic attributes: They focus on the needs of their students, they continually improve the quality of the educational experience, and they use student satisfaction data to shape their future directions.

Student satisfaction studies measure how effectively campuses deliver what students expect, need, and want. These self-examinations enable institutions to measure their students' satisfaction with a wide range of college experiences. By taking "soundings" of student satisfaction, institutions are able to pinpoint their strengths, as well as areas in need of improvement.

Traditionally, colleges and universities have measured one dimension of student satisfaction only—institutional performance. However, for greatest impact and accuracy, satisfaction should be viewed within the context of student expectations or level of importance. For example, the quality of food service and the use of student activity fees repeatedly surface as areas of high dissatisfaction for students. But when asked to indicate the importance of these areas to their overall educational experience, students rate both items relatively low. Likewise, student parking has also been an area of high dissatisfaction, but the level of importance varies by type of institution. Students at primarily residential campuses rate parking with lower importance than students at institutions with a large commuter population. Thus, the interrelationship between expectations and levels of satisfaction is crucial to a better understanding of student behavior.

Principles of consumer theory serve as the basis for this approach to student satisfaction assessment. Students are viewed as consumers who have a choice about whether to invest in education and where to enroll. In addition, students are seen as individuals who have definite expectations about what they want from the campus experience. From this perspective, satisfaction with college occurs when the expectation is met or exceeded by an institution. If strongly held expectations are not met, it is likely that a student will leave an institution in search of one that can meet the expectations. Consequently, it is critical for institutions to focus on both student expectations, as well as levels of satisfaction, in order to ensure that their students are satisfied and, ultimately, that students are retained.

How Does This Approach to Student Satisfaction Assessment Work?

With assessment tools that embody this approach, such as the Student Satisfaction Inventory™, students rate each item by the importance of the specific expectation as well as their satisfaction with how well that expectation is being met. Students are asked to respond to two questions instead of one. The usual question, “How satisfied are you?” is accompanied by an additional question, “How important is it to you?” This second question makes all the difference because it addresses the heart of students’ concerns and allows students to indicate what really matters to them.

Three scores are calculated for each item: (a) an importance score, (b) a satisfaction score, and (c) a performance gap score. Importance score ratings reflect how strongly students feel about the expectation (the higher the score, the more important it is to a student, hence the stronger the expectation). Satisfaction ratings show how satisfied students are that the institution has met the expectation (the higher the score, the more satisfied the student).

The power of this approach lies in the third score—the performance gap. Individually the importance scores and the satisfaction scores are quite helpful, but taken together, they provide invaluable information about how well the institution is meeting students’ expectations. The performance gap score is the difference between the importance rating and the satisfaction rating for each item. For example, if a student gave an importance rating of 6 and a satisfaction rating of 2, the performance gap for that item would be “4.” A negative performance gap results when students rate satisfaction higher than importance. This typically happens only with areas that are not highly valued by students.

Maximizing the Use of All Measures

With this approach to student satisfaction assessment, it is essential to use all the information provided. It is especially vital that all three areas of measurement (importance, satisfaction, and performance gaps) be considered when listening to students’ voices. Focusing on only one piece of information (for example, performance gaps) will not necessarily ensure that you are concentrating on the items that students consider most important. By looking first at how important an item is to students and then looking at the largest performance gaps in those areas of greatest importance, you have a priority-ranked list of leading issues that could dramatically improve students’ satisfaction if addressed.

The items on the survey are grouped statistically and conceptually into scales that represent various functions such as advising, instruction, registration, and financial aid. The scales provide a quick overview of areas that need improvement, while individual items pinpoint areas of concern within a particular area or campus function. The campus can use the scale information to identify the broad perspective in relation to other scale areas and then look closer at individual items within the scale to determine specific issues that need attention within that area. For example, the Campus Services scale represents an array of campus efforts that support students in their academic endeavors. This scale covers everything from adequacy of the library and computer labs to the availability of tutoring. As shown in the example in Table 1, the scores for all items do not carry equal weight within the scale. In fact, the two items that are most important to students, and for which there are the highest expectations, also have the largest performance gaps—adequacy and accessibility of the computer labs, followed by the adequacy of career services. These data reveal the trouble spots in the campus services area where student expectations are not being met.

Table 1.
Scale Example for Campus Services

Scale/Item	Importance	Satisfaction	Performance Gap
Campus Services	5.98	5.10	0.88
Computer labs are adequate and accessible.	6.29	5.12	1.17
There are adequate services to help me decide upon a career.	6.16	4.91	1.25
Library resources and services are adequate.	6.10	5.03	1.07
Academic support services adequately meet the needs of students.	5.98	4.95	1.03
Tutoring services are readily available.	5.88	5.17	0.71
Bookstore staff are helpful.	5.78	5.21	0.57
Library staff are helpful and approachable.	5.70	5.32	0.38

Rating Scale: 1 = low score 7 = high score

What Do the Results Mean?

The matrix in Figure 1 provides a graphic conceptualization of how student expectations (importance) and satisfaction are considered together when pinpointing institutional strengths and opportunities for improvement.

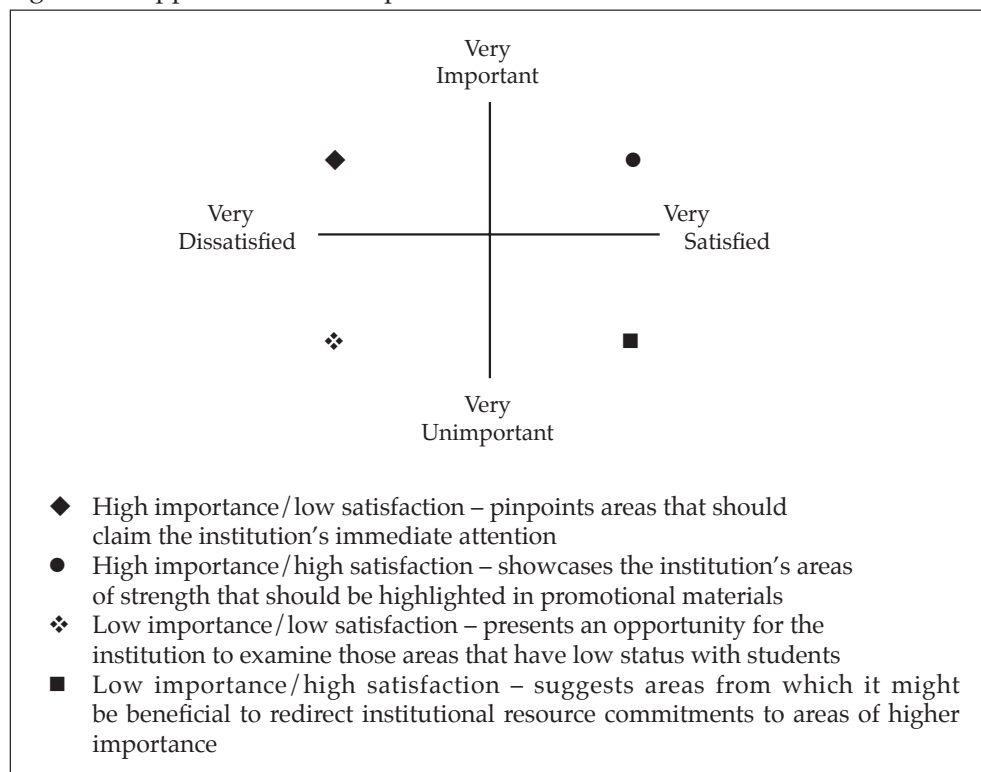


Figure 1. Matrix for Prioritizing Action

Taking Student Satisfaction to the Next Level

Campuses can enhance their understanding of the institutional situation by expanding their assessment to include all campus constituents. In addition to students, this includes faculty, staff, administrators, and board members. Using an instrument such as the Institutional Priorities Survey™, institutions can pinpoint even more precisely those areas where improvements in campus programs and services can impact the level of student satisfaction. This expanded assessment also serves as a campus climate assessment to see where students and campus personnel value the same areas and where perceptions differ. By quantifying the importance faculty, staff, and administrators place on student expectations, as well as their perception of student satisfaction, campus leaders are able to pinpoint more clearly the priorities for action. It also allows the institution to identify opportunities for further dialogue on what truly matters to students and what campus personnel value.

The Institutional Priorities Survey asks campus personnel to indicate how important they believe it is that the institution meets student expectations and their level of agreement that the institution is meeting the expectation. Campus personnel respond with an agreement score rather than a satisfaction score because they are indicating a perception they have about the student experience, rather than a satisfaction level they have from their own experience.

Figure 2 illustrates the identification of common strengths and priorities using the combination of student importance/satisfaction results and campus personnel importance/agreement scores.

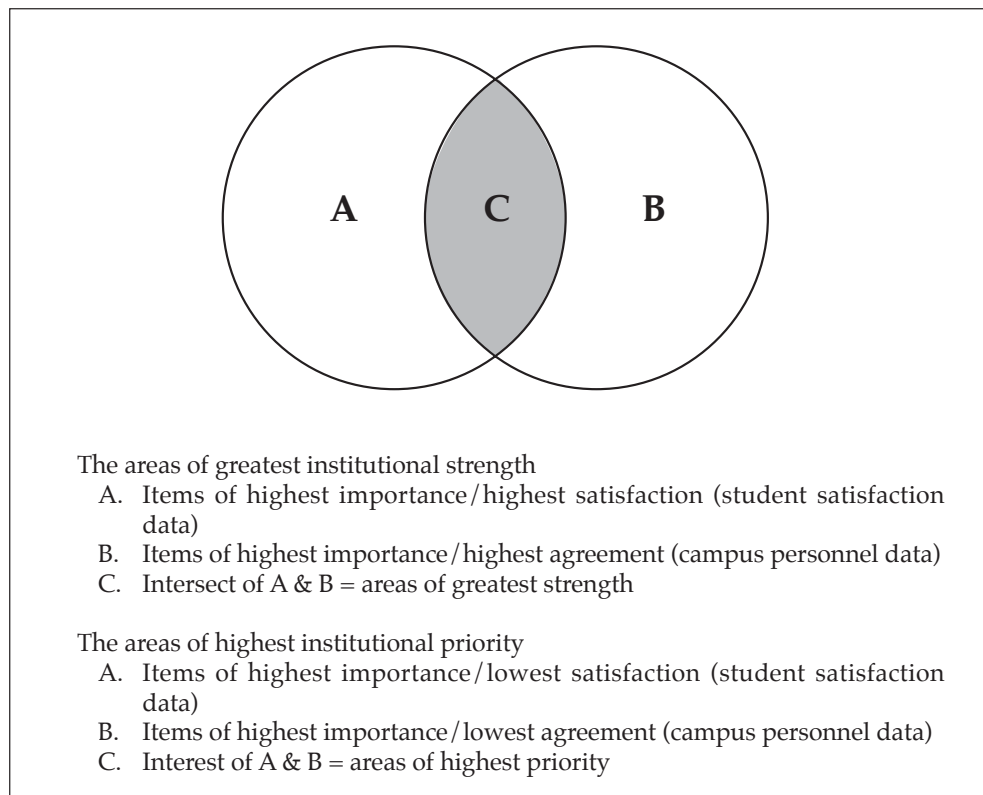


Figure 2. Identifying Common Strengths and Priorities

It is important to review both the areas where overlap occurs and the areas that are viewed uniquely by each group on campus to better understand the overall campus climate. The areas viewed uniquely provide the opportunity for further discussion on campus.

How Do Campuses Use the Results?

Because this approach to student satisfaction generates a significant amount of useful information, institutions find themselves in the unique position to determine:

- The aspects of the college or university that are of greatest importance to their students and contribute most to their satisfaction
- The areas where they are already meeting or exceeding student expectations
- The areas of greatest institutional strength
- Aspects of the institution with the most severe performance gaps
- Areas that are perceived differently by students and campus personnel when combined with the broader institutional assessment
- Modifications or adjustments needed to create a more student-centered campus

Why Do Campuses Embrace This Approach?

The assessment of student expectations and satisfaction provides institutions with the information they need to be responsive to student perceptions. Students whose needs are actively addressed by their institution are more likely to be successful in achieving their educational goals and more likely to persist. Campuses must continue to follow the lead of their business counterparts and take “soundings” of student satisfaction if they are to serve their students and remain competitive. Student satisfaction data can be the driving force for informed decision making on the campus. Many campuses have found that the combination of satisfaction and importance data is a key element for strategic planning, enabling them to identify initiatives yielding the greatest impact on student success.

Part 5



Cognitive Tests



Critical Thinking Assessment: Challenges and Options

Marc Cutright

The assessment of critical thinking by college students is an intriguing, enticing goal. After all, it is arguably the core purpose of what we do; it is what makes our education “higher.” Demonstration of the development of critical thinking would address concerns that students are passive recipients of information. The challenges of democratic citizenship in the information age will tax critical thinking capabilities. High-order thinking skills are of increasing interest to accrediting bodies and state legislatures, among other external constituents. These issues are particularly acute for first-year-student educators; the skills and attributes of critical thinking are explicit goals for many first-year seminars and core curricula.

However, the challenges of assessing critical thinking are substantial and begin with our very definitions of the concept—or even our failures to define it. In the mid-1990s, a large sample of California faculty members affirmed the importance of critical thinking as an educational outcome. Eighty-nine percent of the faculty said critical thinking was a “primary objective” of their teaching—but only 19% could give a clear explanation of the concept. While 78% of these faculty said that students “lacked standards” to assess their own thinking, only 8% could name or describe any of these standards (Paul, Elder, & Bartell, n.d.). At about the same time on the East Coast, 88% of institutions in South Carolina ($N = 60$) indicated that the development of critical thinking was a key institutional goal—but only 46% had defined critical thinking (Cook et al., 1996).

While it is probably best that the assessment of critical thinking begin with an institutional discussion of its particular definition in that context, some well-accepted definitions and theories lend guidance. For example, Bloom’s Taxonomy (1956) ranges, on the low end, from memorization, listing, definition, and so on, to the ability to evaluate, assess, and judge at more sophisticated levels. The 1990 Delphi Report on critical thinking, endorsed by an expert panel from a variety of disciplines, defined critical thinking as “purposeful, self-regulatory judgment which results in interpretation, analysis, evaluation, and inference, as well as explanation of the evidential, conceptual, methodological, criteriological, or contextual considerations upon which that judgment is based. . .” (Facione, 1990, p. 3). Robert Ennis (n.d.), developer of the Cornell Critical Thinking Test, says critical thinking “means reasonable and reflective thinking on deciding what to believe or do,” and he holds that it involves both dispositions and abilities. Other definitions abound.

Beyond definitions, other questions have to be answered before critical thinking can be meaningfully assessed on a campus. Among them:

- Is the campus interested in dispositions to critical thinking or skill attainment?
- Is the campus interested in the assessment of critical thinking as a pre-test, post-test, pre-post combination, instructional goal, or some combination thereof?
- Will key stakeholders accept that no single assessment will tell them everything about individuals' thinking skills or is fully dependable?
- Have those charged with assessment considered circumstances that may affect skill attainment other than classroom instruction? Maturation itself increases critical thinking to some degree, regardless of formal education.
- Have assessment professionals on the campus considered the confounding of critical thinking with writing ability, math skills, vocabulary, or other discreet concepts? A student's ability to construct a conventional essay, for example, may be a matter of mastering a formula for such rather than putting real critical thinking into it, and the two are often confused. How important is it to you to isolate critical thinking from these other concepts and abilities? Conversely, do key stakeholders on the campus hold the position that writing ability is integral to critical thinking and its demonstration?
- Does the campus support the chosen approach, including alignment of definitions and assessments with the curriculum?
- Is quantitative reasoning part of the campus' critical thinking concept and goals? Some definitions and instruments to assess critical thinking include quantitative reasoning skills, while other definitions and assessments consider them distinct issues.
- Is there sufficient faculty support for critical thinking as a goal, and is there sufficient involvement in the assessment of critical thinking, that changes in programs, instruction, and curriculum might come about from assessments? As is generally true in student assessment, measurement without feedback to instruction is unlikely to lead to any improvement.
- Will the assessment environment for students call forth their best, honest efforts to do well? For example, a high-stakes pre-test environment, perhaps for the purpose of section placement, combined with a low-stakes post-test environment, would likely yield relatively insignificant evidence gains.

Once these and other key questions can be resolved to the satisfaction of primary campus constituents, the selection of instruments is key. Vendors for each of the instruments noted below—and the list is not exhaustive—can provide substantial information on reliability, validity, and the definition of critical thinking or a closely related concept on which the instrument is based. Costs are difficult to cite with meaning; charges vary not only on the length of the instrument, but on such factors as whether the instrument is location-scored or returned for such to the vendor, the complexity of the testing report, the numbers of individuals tested, and whether essays are involved. A very rough range for testing costs would be from \$4 per student to more than \$20.

Instruments Assessing Critical Thinking

- *The Watson-Glaser Critical Thinking Appraisal*, from The Psychological Corporation, comes in two basic formats, a 40-question form taking 45 minutes, and an 80-question form taking 60 minutes. Both forms use multiple-choice questions and passages of text for evaluation. The Watson-Glaser produces a single score based on the abilities of inference, recognition of assumptions, deduction, interpretation, and evaluation of arguments.
- *The Cornell Critical Thinking Test*, from Critical Thinking Books & Software, has a generally targeted test for “grade 5 to adult,” developed by Robert Ennis. The Level Z test, the variation probably most appropriate for college-level testing, looks at induction, deduction, credibility, identification of assumptions, semantics, definitions, and prediction in planning environments.
- ACT’s *Collegiate Assessment of Academic Skills* (CAAP) is targeted to “post-core” students in higher education (as are The Academic Profile and College BASE, summarized below). The CAAP measures writing (through an essay), reading, math, science reasoning, and critical-thinking. The critical-thinking test measures the ability to clarify, analyze, evaluate, and extend arguments. It is multiple choice, tied to text passages. The CAAP is available in individual modules.
- *The Academic Profile* of ETS comes in a standard, two-hour, 108-question form, on which both group and individual scores are reported; the abbreviated 40-minute, 36-question form yields group data only. Area tests in the humanities, social sciences, and natural sciences each include measurements of reading and critical-thinking ability. There is an essay option.
- The University of Missouri’s *College BASE* has test content on English, essay writing, math, science, social studies, and reasoning competencies. The latter is assessed in ascending levels of reasoning: interpretive, strategic, and adaptive. The reasoning competency questions are embedded within the domain tests. Modules can be selected. A more detailed description of College BASE is available elsewhere in this volume.
- Insight Assessment, formerly California Academic Press, offers two tests of particular interest. Both are based on the Delphi definition of critical-thinking. *The California Critical Thinking Skills Test* is targeted to undergraduates, graduate students, and professionals. Several forms are available, all of them include 34 multiple-choice items, take 45 minutes to complete, and are discipline-neutral in content. *The California Critical Thinking Disposition Inventory*—disposition being distinct from skills—has scales on truth seeking, open-mindedness, analyticity, systematicity, critical-thinking self-confidence, inquisitiveness, and cognitive maturity. The instrument is 75 items and is Likert-scaled, taking about 20 minutes.

Several institutions and college systems have made notable, independent efforts to assess and drive critical thinking, and their work is available for examination and emulation.

- The University of South Florida’s *Cognitive Level and Quality Writing Assessment Instrument* (CLAQWA) is based on Bloom’s Taxonomy. Writing

and the demonstration of cognitive skills are assessed independently based on the same writing sample. A more detailed description of CLAQWA is available elsewhere in this volume.

- The Minnesota Community Colleges have developed the *Critical Thinking Inventory*, based on Robert Ennis's work and on adaptive interviewing techniques from Cathy Baumann. The interview approach is based on models of the assessment of second language oral proficiency. The inventory can be targeted to subject areas or can be interdisciplinary, and it assesses a variety of types of reasoning, from inductive generalization to values reasoning.
- *The Critical Thinking Project and Rubric* at Washington State University has been funded by the state, the Fund for the Improvement of Post Secondary Education, and various foundations. The rubric yields a score for a writing sample and focuses on problem/issue identification, recognition of one's own perspective, recognition of the perspectives of others, assumptions, supporting evidence, context, and conclusions. Its proponents hold that its main benefit has been as an impetus to the adoption of particular instructional strategies, by making the particular elements of critical thinking more explicit for classroom and assignment incorporation.

Whatever means of assessment are used, the topic of critical thinking will continue to grow in centrality to our assessment efforts, and interest in the development of new means of assessment will remain keen.

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Evaluating General Education Outcomes: College BASE-lining Your First-Year Students

*Pamela A.
Humphreys*

Recent research by the Policy Center on the First Year of College at Brevard College emphasizes the importance of a student's early collegiate experience in succeeding during subsequent post-secondary years. Surveys and questionnaires evaluate many important components of student life, while testing instruments assess progress in academic achievement. The development of basic skills provided in the general education curriculum for beginning students supports their completion of academic goals in their major field of study and provides the groundwork for post-graduate study and attainment of career goals.

Assessment activity is often initiated on campuses to improve retention and graduation rates. While retention and graduation rates are extremely important goals, the rates alone do not indicate individual academic progress and success in general education, nor do the rates reflect institutional effectiveness. The College Basic Academic Subjects Examination (College BASE or CBASE) is one instrument designed for assessing knowledge and skills in general education. While a standardized test is only one tool for assessment, scores from standardized tests, when triangulated with other quantitative and qualitative assessments, can be useful in evaluating the first year in college and in providing a baseline for later assessments.

College BASE was developed at the University of Missouri-Columbia in the mid-1980s to

- Respond to concerns about the quality of post-secondary education
- Contribute an assessment instrument in an area where few existed
- Respond to concerns that college entrants may not have the ability to handle college-level work
- Provide a statewide pre-admissions requirement for students advancing to teacher education programs

College BASE was first used in 1988 as a teacher education requirement in Missouri. Because of the broad skill areas tested and the universality of those skills to other fields of study, College BASE is also used to assess campus-wide general education achievement. Currently, the exam is used by approximately 150 institutions nationwide. The users include both community colleges and four-year institutions whose Carnegie designations range from baccalaureate college to research university.

College BASE is a criterion-referenced achievement test that assesses a student's knowledge and skills in English, mathematics, science, and social studies. The exam is made up of 180 multiple-choice items and includes an optional essay prompt. Each subject area tests skills and sub-skills within clusters. For example, the English subject area tests skills in the two cluster areas of Reading and Literature and Writing. The Reading and Literature cluster contains three skill areas: (a) reading accurately and critically, (b) reading analytically, and (c) understanding a range of literature. Most items in this cluster require the examinee to read a given passage and then answer questions about what has been read.

Similarly, in mathematics there are three cluster areas: (a) general math, (b) algebra, and (c) geometry, each with 2 to 3 identified skills. A complete guide to test content appears on the College BASE web site at www.arc.missouri.edu/collegebase/. The guide to test content provides a description of all subjects, clusters, skills, and sub-skills, with sample items.

Each student and the institution receives a copy of the student's score report. The score report provides scaled scores for each of the four subjects and the 11 clusters. Designations of "high," "medium," and "low" are provided for each skill. A composite score is also provided when a student takes all four subjects. The institution also receives a report summarizing the performance of its students in the subjects and clusters described above.

Administration of the four subject areas to all students requires approximately three hours, with an additional 40 minutes when the essay assignment is used. When assessment time is limited, institutions may administer the College BASE 1:1 (short form). This alternative administration method is useful when composite institutional results are more important than individual results. Each student is assigned one or two multiple-choice subjects, spiraled to provide four-subject results. Students receive score reports for the subject(s) taken, and the institution receives a summary of scores for all four subjects, as well as copies of all student score reports.

One of the most important uses of College BASE is to provide baseline data for colleges and their students. Giving the test to incoming first-year students allows the institution to identify individual students' relative strengths and weaknesses, which is a necessary first step in planning for remediation and improving students' chances for success. An additional administration of College BASE, when students have completed their general education requirements, will reveal value-added improvements in achievement of the knowledge and skills measured by College BASE.

When College BASE scores are compared with classroom grades and other qualitative assessments, an analysis of a student's progress and achievements is more complete. With performance information from several different sources, including scores from a standardized test, students are afforded additional opportunities for self-evaluation and reflection, and advisors are provided with an additional data point for counseling. If College BASE is administered a second time in the student's undergraduate experience, a comparison of scores from both administrations should show growth in the areas covered by College BASE.

At the institutional level, advisors and faculty receive important data when the exam is administered during the first year of college. Composite data from first-year students provide information about the preparedness of the students for college work, especially important when students in a new class arrive with varying degrees of secondary school preparation.

By examining institutional composite scores longitudinally, institutional researchers and faculty have base data to complete curriculum review and to plan improvements. Longitudinal data also provide accountability evidence often required by regional accreditation bodies, state legislatures, taxpayers, or tuition-payers.

In addition, an institution may compare its results with composite scores from a peer group of institutions or with scores from a national normative group. While a single assessment instrument will not provide all of the information an institution needs to evaluate its effectiveness, gathering baseline information on first-year students will provide a foundation for further study.

College BASE may be especially useful to institutions that are concentrating more efforts on the academic and personal development of first-year students. By collecting data and providing results, colleges can help ensure that students are better-informed and better-motivated, provide faculty feedback for curriculum review, and offer administrators data on student performance to integrate with other measures of institutional effectiveness.



CAAP General Education Assessment Program

David A. Lutz

A major challenge confronting higher education in the 21st century is assessing student learning in general education. This issue begins with the question of what comprises general education? Faculty have been debating this issue for years, and the purpose of this essay is not to continue that debate but to assume that general education consists of knowledge and skills that provide the foundation upon which all other learning follows. Accordingly, general education is that which includes such topics as communication (reading, writing, speaking, listening), calculation (mathematics through college algebra), reasoning and critical thinking, computer skills, cultural awareness, and the like. Once defined, the next questions are how do we know that students have mastered general education and has our institution contributed to that mastery?

These questions have led to requests by postsecondary institutions for testing companies to develop tools that can be used to assess a number of components of general education knowledge. ACT, Inc., a nonprofit educational testing organization, has been researching and developing instruments to assess general education since 1976, when it received a Fund for the Improvement of Post Secondary Education (FIPSE) grant to develop a competency-based assessment of general education outcomes. As a result of that project, the College Outcome Measures Program was developed, and it served the needs of many institutions for almost two decades before it was withdrawn from use in the late 1990s.

In 1986, ACT began development of a new assessment instrument, the Collegiate Assessment of Academic Proficiency or CAAP. ACT staff conducted an extensive review of relevant literature, convened a national advisory committee, and brought together committees of faculty experts in various subjects. A decision was made to develop tests in reading, writing skills, essay, mathematics, science (reasoning), and critical thinking. Test items were then developed by faculty content specialists from across the country. Once the initial development phase was completed, each item was thoroughly reviewed both internally and externally by faculty, bias, and measurement experts. CAAP, a norm-referenced test to assess student competency, was first piloted by more than 100 institutions in 1988 and became operational in 1990. Several years later, a major study of student learning was undertaken

by the National Center of Teaching, Learning, and Assessment, headquartered at Penn State University. This study used CAAP participants at a representative sample of colleges and universities from across the nation to assess a number of general education outcomes.

The CAAP tests are designed to measure the academic progress of students in general education. The purpose of CAAP is twofold. One, on a group basis, it is used to help institutions improve their instructional programs. Institutions looking at program evaluations can use the CAAP (a) to provide evidence that the general education objectives are being achieved, (b) to document change in student performance over time, and (c) to provide differential performance comparisons in general education instructional programs. Two, on an individual basis, CAAP may be used (a) to show readiness for further education, (b) to identify areas of interventions to assure student success, and (c) to document that a specified level of skill mastery has been attained prior to program or degree completion.

Specifically, CAAP can be used to:

1. Document achievement of selected general education objectives
2. Indicate change from one educational level to another (i.e., "value-added" assessment)
3. Compare local performance with that of other populations
4. Establish requirements for eligibility to enter the junior year
5. Establish other eligibility requirements, such as readiness to take specific advanced courses, to meet entry requirements into selected majors (e.g., nursing, teaching, engineering, business), to meet requirements for entry into an upper-division college or university, or to determine graduation eligibility

CAAP is used by hundreds of institutions (ACT, Inc., 2003a) each year to assess student learning for such purposes as program improvement, regional and professional accreditation, accountability, documenting student achievement, determining eligibility, and performance funding.

Currently there are six equated forms of CAAP. Each test is 40-minutes in length (actual testing time) and may be administered independently or in combination. The CAAP allows maximum flexibility for institutions, so users can elect to test only those areas relevant to their needs. Each of the tests is described as follows.

Reading

The Reading Test consists of 36-items that measure reading comprehension as a combination of skills that cover two broad categories: referring (25-33% of the number of questions) and reasoning (67-75%). Referring skills require students to derive meaning from text by identifying and interpreting specific information that is stated explicitly. Students are asked to (a) recognize main ideas of paragraphs and passages, (b) identify important factual information, and (c) identify relationships among different components of the text. Reasoning skills require students to go beyond the information that is explicitly expressed. Items assess student ability to (a) determine meaning from context, (b) infer main ideas and relationships, (c) generalize and apply information beyond the immediate context, (d) draw conclusions, and (e) make comparisons. There are four passages, each with nine questions. A total score and two subscores are reported.

Writing Skills

The Writing Skills Test consists of 72-items that measure students' understanding of the conventions of standard written English. Spelling, vocabulary, and rote recall of grammar rules are not tested. Two broad areas are addressed: (a) usage/mechanics (44%) and (b) rhetorical skills (56%). The usage/mechanics portion evaluates skills in punctuation, grammar, and sentence structure. The rhetorical skills section assesses strategy, organization, and style. The test consists of six prose passages covering a range of topics, each of which is accompanied by a set of 12 multiple-choice questions. A total score and two subscores are reported.

Writing Essay

The Essay Test is based on the assumption that the common writing skills taught in college-level writing courses include:

- Formulating an assertion about a given issue
- Supporting that assertion with evidence appropriate to the issue, position taken, and a given audience
- Organizing and connecting major ideas
- Expressing those ideas in clear, effective language

Two 20-minute writing tasks, each defined by a short prompt that identifies a specific hypothetical situation and audience, are presented. The situations involve an issue on which the examinee must take a stand and then explain why the position taken is the better alternative. A total score and a score for each essay are reported.

Mathematics

The Mathematics Test consists of 35-items designed to measure students' proficiency in mathematical reasoning. It assesses students' proficiency in solving mathematical problems presented in many college-level mathematics courses and required in upper-division courses. It emphasizes quantitative reasoning rather than memorization of formulas. The content includes two categories: (a) basic algebra (49%), covering pre-algebra, elementary, and intermediate algebra; and (b) college algebra (51%) covering college algebra, coordinate geometry, and trigonometry. A total score and two subscores are provided.

Science

The Science Test has 45 items designed to measure students' knowledge and skills in the sciences. The test content is drawn from biological sciences, chemistry, physics, and physical sciences. It emphasizes scientific knowledge and reasoning skills rather than high-level mathematics or reading skills. The test consists of eight passages, each of which contains scientific information and a set of multiple-choice questions. Each passage uses at least one of the following formats:

- *Data representation* (33%). Knowledge and skills measured include (a) graph reading; (b) interpretation of scatter plots; and (c) interpretation of information presented in tables, diagrams, and figures.

- *Research summaries (54%)*. Students are provided with descriptions of one or more experiments and are asked to examine the design of the experiment and interpretation of the results.
- *Conflicting viewpoints (13%)*. Students are presented with hypotheses or views that are mutually inconsistent owing to different premises, incomplete or disputed data, or differing interpretations of data.

The items are classified as: understanding (18-22%), analyzing (49-53%), and generalizing (27-33%). There is a total score, but no subscores are reported.

Critical Thinking

The Critical Thinking Tests contains 32 items and measures students' skills in analyzing (53-66%), evaluating (16-28%), and extending arguments (19%). An argument is defined as a sequence of statements that includes a claim that one of the statements, the conclusion, follows from the other statements. The Critical Thinking Test has four passages that are representative of the issues that are commonly encountered in a postsecondary curriculum. There is a total score, but no subscores are reported.

CAAP multiple choice tests are scored on a linearly scale of 40 to 80, with a mean of 60 and a standard deviation of approximately 5. Subscores, where relevant, are linearly scaled to have a mean of 15 and a standard deviation of 2.5. The essay test is scored on a six-point, modified-holistic scoring system. Two raters read each essay; and if they differ by a point, the chief scorer adjudicates and determines the reported score.

Student motivation and demographic information is collected for each test to enable a better analysis of student performance. Among the demographic data collected are: ethnicity, gender, age, English as a second language, year in school, student status, cumulative GPA, and educational plans. Reporting by individual demographic category is provided on the Institution Summary Report if at least 25 students are tested.

CAAP provides two student score reports and, where students have performed at or above the national mean, a Certificate of Achievement. A detailed Institutional Summary Report and a Student Roster Report are provided at no charge. Additional services are available for a nominal fee, including a data diskette (contains data for institutions to carry out local research), Linkage Report (links ACT entry test data to CAAP), Combined Institutional Profile Service Report (combines data from several administrations), and customized reports. A new report, the Content Analysis Report, was introduced in early 2004. This report will provide an analysis of student performance on a group basis and will help institutions determine areas of program strengths and weaknesses.

Unique to the CAAP is its ability to link back to entry assessment using the ACT Assessment, COMPASS, or ASSET. Institutions that use any of these other ACT tests as baseline data can document change in student achievement over time by comparing these data to CAAP performance. This service provides significant cost savings to institutions, and it eliminates the need to administer CAAP at entry, which allows institutions to follow their current entry protocols. The results of this approach can be seen in the Linkage Reports. For a longitudinal study, CAAP may be administered to entering first-year students to establish a baseline and then at the end of the sophomore year or the beginning of the junior year to document change from entry to completion of core coursework.

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The Cognitive Level and Quality Writing Assessment Instrument

Teresa L. Flateby

The Cognitive Level and Quality Writing Assessment (CLAQWA) instrument was designed at the University of South Florida to assist instructors with the assessment of the quality of students' writing and the cognitive levels demonstrated (Flateby & Metzger, 1999; 2001). We have discovered through application and investigation that CLAQWA is also effective for large-scale program assessment. Thus, instructors, administrators, and assessment professionals alike might benefit from a framework such as CLAQWA.

CLAQWA was conceived approximately eight years ago in response to needs identified in a two-year general education learning community program in which writing was taught across the curriculum. Because multiple instructors were involved in the creation of the writing assignments and the evaluation of students' papers, a structure was needed to evaluate writing consistently. Accordingly, CLAQWA was designed to assist instructors and program evaluators with the assessment, diagnosis, and grading of student writing and thinking. Faculty teams representing a diversity of departments, including English, measurement, first-year experience, and social sciences, were involved with the development and validation of the two-scale instrument.

Designed to be flexible to accommodate instructors' needs, each scale can be used separately or can be combined to assess students' writing. The scale for cognitive level assessment addresses the development of the writing prompt and the assessment of students' cognitive levels achieved in their writing. This scale, based upon the 1956 work of Bloom and his colleagues, is composed of four levels: (a) knowledge; (b) comprehension; (c) application; and (d) analysis, synthesis, and evaluation. (A portion of the Cognitive Level Scale is displayed in Figure 1.

The quality of writing assessment scale consists of skills commonly found in writing texts (c.f., Hairston, Ruskiewicz, & Friend, 1999; Hodges, Horner, Webb, & Miller, 1998; Lunsford & Connors, 1992; Mulderig & Elsbree, 1990; Troyka, 1999) but is organized and clarified for any instructor who evaluates students' compositions. Three operationalized scale points are described for each subskill. For example, "The paper lacks a main idea," "Main idea is not clearly presented or is not maintained," and "The paper presents and maintains a main idea" are the descriptors for one subskill. (To view a sample of the Quality of Writing Scale, see Figure 2.

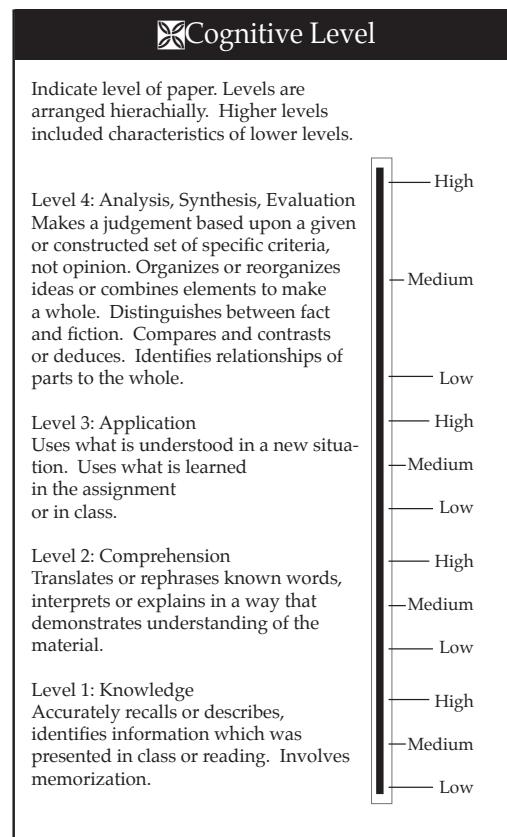


Figure 1. Example of the Cognitive Level Portion of CLAQWA

Because CLAQWA has important writing skills operationalized, encourages the conscious consideration of the cognitive level desired in students' writing, and helps develop confidence in an instructor's evaluation of students' writing, it has multiple functions. It is also flexible, permitting instructors to emphasize writing, cognition or a combination of the two in an assignment. It also is possible to target specific writing skills for a particular assignment or weight skills differently. In short, the use of CLAQWA facilitates clear communication of instructors' expectations, encourages consistent assessment of students' papers, provides a framework for identifying and discussing strengths and weaknesses in papers, and facilitates feedback on students' writing.

🕒	1	2	3	4	5
ASSIGNMENT PARAMETERS					
	Paper does not fulfill assignment requirements.		Paper partially fulfills assignment requirements.		Paper fulfills all the assignment requirements.
	The paper lacks a main idea.		Main idea is not clearly presented.		The paper presents and maintains a main idea.
	The appropriate audience(s) is (are) not addressed.		The appropriate audience(s) is (are) not consistently addressed.		The writer consistently addresses appropriate audience (s).
	The writer's purpose is not evident.		The writer's purpose is not consistently evident.		The writer's purpose is clear and specific.
ORGANIZATION AND DEVELOPMENT: STRUCTURAL INTEGRITY					

Figure 2. Example of the Writing Skills Portion of CLAQWA

CLAQWA has been used to develop a series of related assignments for a first-year experience course ("The University Experience") at the University of South Florida. In an effort to raise students' awareness of their role in becoming successful and responsible students and to guide them in an upward cognitive progression, three prompts were developed thematically and hierarchically. The first required students to write an essay describing an interview with a professor, which included student-constructed questions regarding his or her preferred teaching methods. The second asked students to research, describe, and explain three different teaching methods. The third required them to relate their preferred style of learning—which they identified in an earlier class—to the three teaching methods researched, determine which of the three is best suited to their preferred style, and describe how they could adapt to ensure success in classes less suited to their preferred style. With these assignments, it is hoped that students will gain a clearer understanding of thinking levels and will develop strategies for adapting to different classroom environments. To view these assignments with two levels of specificity, see the appendix at the end of this essay.

CLAQWA also provides instructors with a framework for evaluating students' papers in the first-year experience course. Instruction on the CLAQWA instrument has been provided to assist these instructors—most without formal education in teaching methods or writing assessment—with the first-year experience programs' writing requirement. Several benefits result from this instruction. First, instructors learn to assess writing consistently. Second, when instructors explain the writing skills contained in CLAQWA, and those identified for a particular assignment, students have a clearer understanding of the instructor's expectations and just what constitutes quality writing. Third, when the instructors present the cognitive scale, an awareness of thinking and learning beyond mere recognition and recall results.

CLAQWA also is effective for assessing programs. At USF, students' writing and thinking are studied within the broader assessment of general education. Students' writing is sampled when they first enter USF, at the completion of English Composition II, and during upper-level liberal arts courses. Because hundreds and even thousands of students' papers are evaluated, we originally used a holistic method for scoring. This approach is often the evaluation method of choice for large-scale assessment because of its efficiency and its success for achieving inter-rater reliability. This measurement criterion is of paramount importance for high-stakes, large-scale assessment, as is the case for entrance exams and statewide accountability exams where a comparison to a particular group is desirable (Wolcott, 2000). Holistic scoring has been criticized, however, for not providing students with feedback regarding their strengths and weaknesses. Also, since the holistic method is often norm-referenced, it is less appropriate for measuring change over time and for identifying weaknesses which should be addressed. Typically with this method, anchor papers are selected from the pool of students' essays. These become the standard for assessing all papers within the pool. Thus, a "6" on a 1 to 6 scale could represent very different writing levels depending upon the type of classes or programs in which the writing assessment was completed, e.g., remedial, honors, first year, upper level.

Because we wanted an efficient and consistent framework to evaluate students' writing at several points in students' undergraduate programs and one that would provide our students with some feedback on the strengths and weaknesses of their papers, we collapsed the CLAQWA analytic scale into five major categories. We then compared holistic scores and scores from this abbreviated CLAQWA scale for multiple sets of papers. These studies revealed substantial and respectable correlations (e.g., .80 and above). Because we needed an assessment tool that would provide a constant set of criteria for evaluating change in writ-

ing and a method for identifying problem areas and because the results from the collapsed CLAQWA scale were favorable, we substituted the holistic scale with the abbreviated CLAQWA scale. More recently, we have scored students' papers with the comprehensive CLAQWA scale to identify greater detail regarding students' performance.

In conclusion, CLAQWA appears to serve multiple functions: (a) establishing criteria for specific assignments, (b) communicating the writing and thinking skills expected for an assignment, (c) providing guidance for consistently assessing papers, and (d) offering a framework with which to discuss papers' strengths and weaknesses. CLAQWA also is effective for assisting with program assessment by providing a mechanism for change over time, identifying specific strengths or weaknesses in students' writing, and assessing achievement of a specific writing skill level.

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Appendix

University Experience Writing Assignments

Assignment	Sample Assignment A	Sample Assignment B
Faculty Interview	<p>Describe one of your professor's answers to the following questions:</p> <ol style="list-style-type: none"> 1. Name, faculty rank, and highest academic degree earned and their discipline of study 2. Length of time at USF and other universities before USF 3. Where and when highest degree was earned 4. Undergraduate institution(s) they attended 5. Their biggest problem as an undergraduate and as a graduate student 6. Classes they wouldn't have taken—knowing what they know now about what it takes to succeed as a student 7. The method of teaching do they use most often and why they use it 8. Advice they would give students to succeed at USF 9. The answer to at least one question of your choice—something you've always wanted to know about teaching, the faculty member you chose to interview, or another pertinent question 	<p>You have been asked to write an article for the <i>Oracle</i> about a USF instructor whose course is causing you difficulty. The instructor or the content could be the source of your difficulty. Develop interview questions with your classmates to ask your instructor and include at least one question about the instructor's favorite teaching methods.</p> <p>Your article should be approximately two typewritten pages and should describe the interview, based upon the responses to the questions.</p>

Assignment	Sample Assignment A	Sample Assignment B
Teaching Methods	Describe and explain at least three teaching styles	<p>You have been invited to write an essay to prospective teachers describing three teaching methods. You will need to research three methods, which may differ with regard to characteristics such as instructors' roles, students' roles, environmental setting, and students' ages. As you conduct your research and write your essay, determine which learning style is suited to each method and include this in your essay.</p> <p>The writing project for this assignment will be a three- to five-page essay that informs prospective teachers about your findings. Your essay should incorporate research from at least five sources and follow APA style.</p>
Learning Style	Of the teaching styles described and explained in the above assignment, which style is best for your particular learning style? Give your rationale.	<p>Write a two-page essay to me in which you identify the teaching method researched in the previous assignment which least suits your learning style. What do you now think you could do to improve your chances of success when that method is used? Which of the three methods is best suited to your learning style and why? Make sure you identify to me what your preferred learning style and describe its characteristics. Feel comfortable using "I" in the essay.</p>

Part 6



Trait Inventories



The Hope Scale: A Measurement of Willpower and Waypower

Jerry Pattengale

A few years ago, my college president handed me the weighty copy of Charles R. Snyder's *Psychology of Hope* (1994). Tucked away in this study is the fulcrum of much of Snyder's research—a simple, yet remarkable tool he terms "The Hope Scale." Hope, according to Snyder, is a thinking process in which people have a sense of agency (willpower) and pathways (waypower) for goals.

Snyder's work is intriguing to me, because much of my recent research has been in the area of student motivation, especially intrinsic motivation. I have delivered 20 or so workshops around the topic at regional and national conferences. Several of these sessions were entitled, "Student Success or Student Non-Dissatisfaction?" (Pattengale, 2003b). In short, I found through surveying the above conference audiences that the overwhelming majority of retention and student success programs were founded on the premise of removing areas causing student dissatisfaction. In other work, I ask if some universities should change the sign above from "Office of Student Success" to "Office of Student Non-Dissatisfaction." (Pattengale, 2003a). While a focus on satisfaction usually proves helpful and often correlates with improved retention, it does not get at the core of the student experience. It focuses on the "how" rather than the "why." The latter, in my opinion, should be the primary concern of student success programs. Thus, Snyder's preoccupation with "Willpower" and "Waypower" proved provocative. Though he stops short of "Why" questions and assumes students are goal oriented, his work remains helpful in understanding topics related to a student's core.

The Hope Scale

The Hope Scale has only 12 questions, much shorter than most lengthy student surveys. The following are the eight questions actually measured.

1. I can think of many ways to get out of a jam. (Pathways)
2. I energetically pursue my goals. (Agency)
3. There are lots of ways around any problem. (Pathways)
4. I can think of many ways to get the things in life that are most important to me. (Pathways)

5. Even when others get discouraged, I know I can find a way to solve the problem. (Pathways)
6. My past experiences have prepared me well for my future. (Agency)
7. I've been pretty successful in life. (Agency)
8. I meet the goals that I set for myself. (Agency)

Students rate these statements from 1 (definitely false) to 4 (definitely true). The sum of these answers provides the Hope Score. The designation of questions is in parentheses. Questions related to willpower are labeled "agency," and those related to waypower are labeled "pathways."

My research colleague, Michael Boivin, agreed to test the tool over a two-year period with more than 1,000 students. Under his mentorship, Heidi Ihrke (2002), at the time a student at Indiana Wesleyan, conducted a key aspect of the study. She concluded that "Hope as a measurable construct is an important component of likelihood of student success in facing the challenges of transition to the university learning community in the freshman year, and is relevant to spiritual and emotional well-being in that transition process" (p. 1). The Hope Scale was administered in conjunction with the College Student Inventory (CSI) and the Spiritual Well-Being Inventory (SWB) to nearly 600 first-year students and was significantly related to student success indicators on the CSI and existential well-being indicators on the SWB. A group of sophomore-level psychology students took the Hope Scale in conjunction with the 16-Personality Factor Inventory (16-PF) for assessing personality traits. Here, the Hope Scale was found to be related to measures of emotional well-being and leadership styles (Ihrke).

In 2001, Boivin and graduate student Ellen Jones conducted a separate study with a different cohort to examine relationship between the Hope Scale and critical dimensions of personality. Some of these results are influencing our decisions in our new Center for Life Calling and Leadership (made possible through the generous funding of The Lilly Endowment).

The Hope Scale will help us design student success tasks, especially when the evidence seems to support the notion that the stronger the hope of fulfilling a dream, the more likely a college student will remain in school. Snyder and his colleagues at the University of Kansas-Lawrence have not only discovered ways to measure hope, they have also found strong correlations between one's belief in their abilities to reach goals and goal attainment. According to Snyder (1996), "high-hope individuals" typically:

1. Clearly conceptualize their goals
2. Envision one major pathway to a desired goal and can generate alternative pathways, especially when the original one is blocked
3. Perceive that they will actively employ pathways in pursuit of their goals

In my curriculum on motivation, I use the actions of heroes to help students understand the dynamics of their passion and direction. Likewise, Snyder studied what high-hope people say and do. Based on these observations, and on his research on the "two necessary components" of "goal directed thinking"—agency [willpower] and pathways [waypower]—he has provided dozens of careful studies of motivation that have applications for student success studies. (Curry, Snyder, Cook, Ruby, & Rent, 1997, p. 1257) Snyder notes: "Although pathways and agency thinking are two distinct components of the hope model, they are functionally inseparable. In fact, they are theorized to influence one another reciprocally, such that a change in one will cause a commensurate

change in the other” (Snyder, 2002, p. 299). Snyder gives the following suggestions for enhancing hope:

- Learning self-talk about succeeding
- Thinking of difficulties encountered as reflecting wrong strategy, not lack of talent
- Thinking of goals and setbacks as challenges, not failures
- Recalling past successes
- Hearing stories of how other people have succeeded (e.g., movies, tapes, books)
- Cultivating friends with whom you can talk about goals
- Finding role models that you can emulate (everyday heroes are closer than you think)
- Exercising physically (relearning that the body and mind are connected)
- Eating properly (remembering that you need fuel)
- Resting adequately (recharging for the next active goal-directed output)
- Laughing at oneself (especially when stuck)
- Regoaling (persistence in the face of absolute goal blockage deflates agency and pathways)
- Rewarding oneself for small subgoal attainments on the way to larger, long-term goals
- Educating oneself for specific skills, as well as learning how to learn

Snyder (1995) also notes that the common process among interventions to promote positive change or growth is increasing feelings of agency and opportunities or “pathways” for achieving personal goals.

Colleges spend considerable resources to determine which students are most likely to succeed. Thus, a tool like the Hope Scale can prove valuable in the admission process. Also, it can help in targeting students who are at-risk due to low motivation. Several scholars note that one question more than any other seemed to identify at-risk students—“When the going gets tough, I . . . ?” Snyder’s work sheds light on this response.

While a full discussion of Snyder’s theories is beyond the scope of this article, his various publications of the Hope Scale are ripe for further study and pregnant with application (e.g., <http://www.ku.edu/~crsnyder/child.htm>). He gives us a glimpse of students’ pursuit of goals and how they handle challenges. This scale is worthy of a closer look. It might save a university considerable funds and hours of administrative oversight. More important, it might edge first-year programs closer to looking at life goals. Snyder stops short of this important step, but points us in the right direction. Perhaps we could add the category of “wantpower” (Pattengale, in press).

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What are Learning Styles? Can We Identify Them? What is Their Place in an Assessment Program?

Linda Suskie

I had an epiphany of sorts a few years ago when I began attending a different place of worship. At my prior place of worship, when a speaker read passages aloud at service, I followed along in a booklet. My new place of worship did not provide such a booklet, and without the written backup, I was struck by how difficult it was for me to understand what was being said.

I realized from this experience that I do not learn well by listening and that I had subconsciously developed adaptive strategies over the years, such as following along in a book. If I do not learn well by listening, how *do* I learn best? While I can learn by reading, I realized that I learn best by visualizing: using tools such as maps, outlines, Venn diagrams, flow charts, or bulleted lists.

My experience in uncovering my learning preferences convinced me that the concept of learning style makes intuitive sense. But does empirical research bear out my intuition? Are there valid models of learning style? Can learning styles be identified reasonably accurately? And, most important, can information on learning styles help faculty and assessment practitioners give students the best possible learning experience? This article will attempt to address these questions.

What is “Learning Style”?

A frequently cited definition of learning style is “cognitive, affective, and physiological traits that serve as relatively stable indicators of how learners perceive, interact with, and respond to the learning environment” (Keefe, 1982, p. 44). Beyond this general definition, however, conceptualizations of learning style vary widely, as the models discussed in this article make clear.

Do Learning Styles Exist?

Most educators “acknowledge the existence of learning styles and their impact on learning process” (Vincent & Ross, 2001). Some people, for example, clearly prefer reading books to listening to them on tape, and some people clearly prefer working alone to working with others (Curry, 1987). Indeed, some learning preferences, such as favoring a quiet background, seem so self-evident that a validated instrument may not be necessary to assess them. As Nagy (1995) notes, “Little can be said about preference questions that ask, for example, what time of day a

student prefers to study, except to wonder if such information requires the expense of a standardized test" (p. 567).

Learning style advocates point to a number of studies validating the existence of learning styles. Swanson (1995), for example, cites several studies identifying cultural differences in learning style. Critics assert, however, that for a learning style theory to be valid and useful, researchers must show that students learn more effectively when their learning styles are accommodated than when they are not, and only a limited number of studies have shown this. Some critics, therefore, feel that the usefulness or validity of learning style models and instruments has not been definitively established (Bonham, 1988a; Bonham, 1988b; Kavale & Forness, 1987; Rayner & Riding, 1997).

A particular concern (Grasha, 1990; McKeachie, 1995; Stellwagen, 2001) is that most learning style theories label or pigeonhole students into a few discrete, quantitative, and often dichotomous categories rather than recognizing that learning style evolves as one learns and grows and varies by discipline (Silver, Strong, & Perini, 1997).

What Models and Instruments Are Available to Identify Learning Styles?

Learning style models abound, as do myriad published and web-based instruments. The models are not mutually exclusive or necessarily complementary (Vincent & Ross, 2001). Here are some of the most prevalent models.

Field Dependence/Field Independence Model

Field dependent learners pay more attention to what they see than what they feel. Their perceptions are influenced by their environment; they use their entire surroundings to process information, and they focus on the whole rather than on parts. They are externally motivated, prefer to work collaboratively rather than independently, are people-oriented, and are affected by instructor's interaction and communication style.

Field independent learners, meanwhile, pay more attention to what they feel than what they see. Their perceptions are not influenced by their environment; they focus on the parts rather than the whole. They are intrinsically motivated, prefer to work independently or competitively, and take a more impersonal approach to learning.

The field dependence / field independence model has successfully predicted academic performance in a number of studies, which suggests that field independent students are more likely than field dependent students to succeed academically (Hayes & Allinson, 1997; Thompson et al, 1979; Wilson, 1998). Instruments based on the field dependence / field independence model include the Group Embedded Figures Test (Witkin, 1971) and the earlier Embedded Figures Test (Benton & Spreen, 1969).

Jungian Models

Jungian models are based on the work of Carl Jung. The best-known application of his work is the Myers-Briggs Type Indicator (Briggs & Myers, 1998), which identifies four personality dimensions: (a) Extraversion-Introversion, (b) Sensing-Intuition (preferring the concrete or the abstract), (c) Thinking-Feeling (preferring logic or values), and (d) Judging-Perceiving (being organized or flexible and easygoing).

Other instruments using elements of Jungian models include the Gregorc Style Delineator (Gregorc, 1985), the Keirsey Temperament Sorter II (Keirsey, 1998), and the Kolb Learning Style Inventory (Kolb, 1999). Opinions of the validity of the Gregorc and the Kolb

are mixed (see, for example, Seidel & England, 1997; Sewall, 1986 regarding the Gregorc and Hayes & Allinson, 1997; Curry, 1987 regarding the Kolb). There appears to be limited evidence of the validity of the Keirsey (see, for example, Keirsey, 1998; Kelly & Jugovic, 2001).

Sensory Models

Under these models, visual learners prefer to learn through visual stimuli such as graphs and charts; auditory or aural learners prefer to learn by listening; and tactile, haptic, or kinesthetic learners prefer to learn through hands-on experiences involving touch or bodily movement. Some models identify additional sensory preferences.

Instruments based on sensory models include the DVC Learning Style Survey for College (Miller, 2000), the Perceptual Modality Preference Survey (Cherry, 1997), the Personal Learning Style Inventory (Wyman, 1999), the Self Administered Inventory of Learning Strengths (Siegel & Lester, 1994), the VARK Questionnaire (Fleming, 1998), and What's Your Learning Style? (Bogod, 2002). All these instruments appear to have little or no evidence of reliability or validity. Because they all address sensory perceptions; however, they make intuitive sense and may have some face validity.

Social Interaction Model

Under this model, collaborative or cooperative learners enjoy working harmoniously with peers, competitive learners are suspicious of peers, and individualist learners prefer learning in isolation. One instrument based on this model is the Learning Preference Scales (Owens & Barnes, 1992), but it has limited evidence of reliability and validity (Ferro, 1998; Miller, 1998).

Howard Gardner's Multiple Intelligences Model

Gardner has identified eight intelligences (1983; Checkley, 1997): (a) logical / mathematical, (b) visual / spatial, (c) bodily / kinesthetic, (d) musical, (e) linguistic, (f) interpersonal, (g) intrapersonal, and (h) naturalist. Widely used in basic (K-12) education, Silver, Strong, and Perini (1997) note that the model is "backed by a rich research base" (p. 23). Others assert, however, that few studies validate Gardner's model (Klein, 1997; Traub, 1998).

Gardner has not developed an instrument to assess multiple intelligences and, indeed, opposes the use of multiple-intelligence "tests" for a number of reasons (1996). Instruments based on his model include the Multiple Intelligence Inventory (Learning Disabilities Resource Community, 1983), Multiple Intelligences Developmental Assessment Scales (Shearer, 1999), Multiple Intelligences Inventory for Adults (Armstrong, 1999), and Test Yourself—How Are You Smart? (Rose & Nicholl, 1998). It appears that none of these instruments has been effectively validated.

Biggs' Approaches to Learning Model

Under this model, students with a surface approach to learning aim to meet minimal standards and learn unintegrated details, while students with a deep approach have an intrinsic interest in learning and learn meaning and relationships. Biggs' Study Process Questionnaire (1987) and revised two-factor Study Process Questionnaire (Biggs, Kember, & Leung, 2001) have evidence of validity (Brown, 1992; Hall, 1992; Sachs, Law, & Chan, 2003).

Multiple Models

Some learning style instruments appear to combine several models. The Index of Learning Styles (Soloman & Felder, 1987), for example, assesses four learning style dimensions:

1. Active (prefers to do something active with information, such as discuss, apply, or explain) – Reflective (prefers to think about it)
2. Sensing (prefers to learn facts and follow established processes) – Intuitive (prefers abstractions and learning by discovery)
3. Visual (prefers to learn through pictures, diagrams, and demonstrations) – Verbal (prefers to learn through written and spoken words)
4. Sequential (prefers to learn in linear steps) – Global (prefers to absorb material almost randomly and put things together in novel ways)

The authors acknowledge that “the ILS is still under development and cannot be considered as having been validated” (Index of Learning Styles, n.d.).

The Productivity Environmental Preference Survey (Dunn, Dunn, & Price, 1993) assesses a multitude of dimensions, including:

1. Immediate Environment (with subscales for noise level, light, temperature, design, emotionality, motivation, persistence, responsibility, and structure)
2. Sociological Needs (with subscales for learning alone / peer oriented, authority figures present, and learn in several ways)
3. Physical Needs (with subscales for auditory, visual, tactile, kinesthetic, requires intake, evening-morning / late morning / afternoon, and needs mobility)

This model has been used in countless studies, and some feel that it has been well validated (Curry, 1987; Dunn & Griggs, 1995; Lewthwaite & Dunham, 1999). Others, however, strongly criticize the model as being unvalidated (Bonham, 1988a; Kaiser, 1998; Kavale, Hirschoren, & Forness, 1998).

The Learning and Study Strategies Inventory (Weinstein, Palmer, & Schulte, 2000) focuses on behaviors rather than temperaments or predispositions. Subscales examine motivation, anxiety, time management, attitude, concentration, information processing, selecting main ideas, and test taking. A more detailed overview of LASSI is available elsewhere in the monograph. Opinions of its validity and value are mixed (Blackwell, 1992; Hayes, 1992).

Can Learning Styles Be Meaningfully Identified?

Unfortunately, few learning style models and instruments have been well validated (McKeachie, 1995), so it is questionable whether most existing instruments can accurately identify a student’s learning style. But just as quizzes in popular magazines can sometimes give us useful insight into ourselves, unvalidated learning style instruments *may* give our students constructive clues about how they learn best. The key is not to take the results of any one instrument too seriously. Students should not let any one instrument dictate their learning style (Bonham, 1988a), and results should not be used to make any significant, potentially harmful decisions about students, pedagogy, the curriculum, and other areas.

How Might Students Identify Their Learning Styles?

As Guild (1997) notes, learning is a complex process, and students learn in a broad variety of ways. Because any learning style instrument is imperfect and assesses only certain learning style dimensions, any one learning style instrument will give an incomplete picture. It is therefore sensible to ask students to take the initiative in reflecting on their own learning styles, using several instruments, not just one, to increase their self-awareness.

- Ask students to write a paragraph explaining how they learn best (Crowe, 2000; Grasha, 1990).
- Have students complete at least two learning style inventories that reflect different models, and compare the results with their self-description.
- Ask students to reflect on what and how they learned from a recent assignment.
- Have students use all of this information to refine their statement of how they learn best. Their statement should include study / learning strategies they might use to best take advantage of their particular combination of learning styles and to help them learn in situations where they must use approaches that do not correspond with their style.

How Can Faculty Use Information on Learning Styles to Help Students Learn?

Perhaps the primary benefit of information on learning styles is helping faculty understand better their students and how they learn (Guild, 1997). Faculty should first understand that students might use learning styles that may not match their own. Schroeder (1993) reports that more than 75% of faculty learn best through abstract concepts, ideas, and theories, compared to just 40% of entering students and 25% of the general population. Most students, in contrast, learn best through concrete, practical, structured, and sequential experiences.

With this knowledge, faculty can help students by using a variety of teaching / learning strategies so that all students, regardless of learning style, have at least occasional opportunities to learn in settings congruent with their preferred styles (Anderson & Adams, 1992; Wilson, 1998). Specific suggestions for doing this come from a variety of authors: Clark (2000), Montgomery & Groat (2002), Ogden (2003), Siegel and Lester (1994), and Vincent and Ross (2001). In addition to the usual lectures and readings, for example, engage students' senses and give them the structure that some prefer by providing visual aids such as lists or diagrams, written outlines of key points, structured opportunities for group interaction, practical "real world" examples, and a variety of assignment formats. Also try to get to know your students, help them get to know you, and provide plenty of feedback. Finally, include curricular experiences, such as the group of exercises described above, that help students learn how to learn (Claxton & Murrell, 1987). This is particularly apropos for faculty teaching in first-year experience programs. Most good teachers, of course, already do these things instinctively.

Faculty should *not* try to customize their teaching to accommodate every student's individual learning style, as learning style models are not yet sufficiently validated to be able to determine definitively how each student learns most effectively (Zarghani, 1988).

Furthermore, while students should use their “strong” learning styles to best advantage, it is just as appropriate for them to develop their abilities to use other learning styles (Grasha, 1990; McKeachie, 1995; Montgomery & Groat, 2002) and to work with faculty whose styles differ from their own. Finally, as Gardner (1996) states, “There is no point in assuming that every topic can be effectively approached in at least seven ways, and it is a waste of effort and time to attempt to do this” (p. 17).

How Might Learning Styles Be Part of an Assessment Program?

Many of us focus our assessment efforts on the *outcomes* of a course or program, but it is also useful to assess learning *processes*, *contexts*, and *inputs*, as these factors help us understand the outcomes. Learning style is an input, along with high school record and other attributes that students bring with them to college. Information on learning style can be helpful when assessing learning processes or outcomes; it may help explain why some teaching and learning strategies are not consistently effective.

One of the most exciting applications of learning styles to assessment is classroom research that investigates how information on learning styles can improve teaching (Claxton & Murrell, 1987). It is clear that we desperately need more research on learning styles: what they are, how do we assess them, and how do we use them to help our students make the most of their learning opportunities. Anything we can learn about learning styles through our own assessment efforts will help not only our students but our colleagues throughout academe as well.

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Assessing the First College Year: Some Concluding Thoughts

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As the essays in this monograph make clear, there are a variety of approaches for conducting assessment on our campuses. Given the critical importance of the first college year, it seems obvious that we would focus our assessment efforts on the programs, courses, curricular structures, and services designed to help students make the transition to college and succeed on our campuses. In this concluding essay, we attempt to synthesize some of the larger themes seen throughout the monograph.

Reasons to Conduct Assessment

Many reasons exist to conduct assessment. This monograph highlights a broad array of methods and describes the outcomes achieved; however, we need to know much more than this. When performing assessment, we must also know why the information is needed and how we are going to use the findings to bring about positive change. Reasons for conducting assessment vary and can include the following:

- *Responding to demands for accreditation or accountability.* Accrediting bodies set criteria that institutions, departments, and programs must meet in order to be deemed well-functioning and offering the level of knowledge and service needed for student success. Assessment is an easy way to demonstrate that the key criteria are being addressed and standards are being met. In addition to accrediting bodies, institutions must respond to the demands of external funders and governing boards to demonstrate that students are performing at an acceptable level and achieving the learning outcomes established by the institution. Demands for accountability also come from internal constituencies, as department chairs and program administrators must demonstrate the effectiveness of curricular structures, courses, programs, and services to compete for increasingly scarce resources. In all cases, assessment can be used to demonstrate how a program benefits students and the institution and to show how the program is meeting expectations and contributing to established goals.
- *Demonstrating student persistence and success.* Perhaps

the number one outcome individuals and institutions point to when responding to demands for accountability in first-year initiatives is retention—we want to know whether the program in question leads to continuous enrollment for students and ultimately, to graduation. Assessment efforts can certainly report persistence and graduation rates and the academic success of students, but they can also help us determine *why* programs are contributing to student success and which students are most likely to benefit. Assessment results can also help us understand why programs, courses, or services are not producing the level success and persistence that we might expect. When programs are successful, assessment may help us explain why different groups experience different outcomes.

- *Piloting new programs.* The Freshman Absence-Based Initiative at the University of Mississippi is a good example of using assessment during the pilot phase. Before committing resources to an untested, large-scale initiative, administrators frequently want to know “will it work?” Building an assessment plan into the pilot allows program designers to report on whether or not the program is meeting the established goals. The results of assessment also help us understand what changes need to be addressed before undertaking large-scale implementation. It is necessary to assess all aspects of the program, from goals to outcomes, to determine whether or not it is worthwhile to continue.
- *Responding to natural curiosity.* While assessment is clearly tied to issues of program maintenance and improvement, we may choose to engage in assessment simply to learn more about our work. Assessment efforts can help fulfill our desire to know more about what we are doing and the impact it is having on others. When our initial assessment efforts generate unexpected results, we may also be curious to know why that particular set of results appeared.

Many of the reasons institutions chose to do assessment focus on an examination of the end results, but we should never engage in assessment activities to merely confirm existing beliefs. Even when we discover what we believed to be true, we should strive to push past it in order to understand the *why* and *how* of the outcomes. At the same time, we must be open to the questions that assessment uncovers and be prepared to view this effort as an evolving, ongoing process rather than a one-time-only activity.

Benefits of Assessment

The benefits of an effective assessment program seem fairly obvious: Assessment offers the opportunity for program justification and improvement. When assessment supports effective initiatives for students, it may also translate into improved retention and persistence, positive learning outcomes, and satisfaction with college. Yet the benefits of assessment efforts go beyond the bottom line, as authors in this volume make clear. Successful assessment initiatives can produce the following results:

- *Productive campus dialogue.* Assessment efforts frequently generate campus dialogue around issues that are important to students but that have not been previously voiced or seen as a concern. The Prompts Project at Virginia Commonwealth University raised awareness of important, but unspoken issues as

faculty and administrators reviewed student responses to weekly questions and began to bring these responses into campus meetings. As such, these dialogues can create the energy needed for true campus transformation.

- *Greater buy-in and ownership of courses and programs.* Repeatedly, we have seen two elements in successful assessment efforts. The first is the involvement of a wide range of stakeholders in the development of the assessment program, and the second is the wide dissemination of assessment results. The first element ensures that assessment results will be seen as valid, while the second can increase the visibility and regard of a program or course on campus. Participants in assessment—whether as members of the planning team or as those who participate in the implementation plan—may themselves experience a greater sense of buy-in or ownership for the programs that they are assessing or of which they are a part. For example, Debora Scheffel and Marie Revak report that the process of keeping course diaries increased faculty members' understanding of the value and importance of the first-year seminar. It also appeared to increase the likelihood that they would teach the course again. Thus, faculty participation in assessment at the grassroots level has the potential to transform their attitudes toward programs and courses.
- *Increased innovation.* Closely related to the previous point, is the role that assessment plays in innovation. As Randy Swing points out in his overview of the monograph, assessment should not be done merely for assessment's sake. Underlying these efforts must be the notion of program improvement. Participation in assessment can increase our curiosity and willingness to experiment, especially if we have faith in the results of assessment. For example, if X does not appear to be delivering the desired result in this class, or program, or with this group of students, faculty or program administrators may ask such questions as: What can I do to change that result? How do I transform the class or program? What additional information do I need to know about this group of students to be able to serve them better? When well-designed assessments offer answers to these questions, faculty and administrators can generate effective plans for change.

Choosing an Assessment Model

The essays in this volume are not intended to present readers with a blueprint for conducting assessment. Rather, they offer a range of options from which to choose and which must necessarily be tweaked to meet the needs of any particular campus. These essays do, however, provide us with some good information about the advantages and disadvantages of different assessment methods. A good portion of the monograph is devoted to standardized, commercially available assessment instruments. Many of these offer the possibility for institution-specific questions, which allow campuses to tailor surveys to their unique assessment needs. Such surveys are typically easy to administer, and the quantitative results they produce are easy to compile and report, but the picture they present may be incomplete.

Qualitative assessment methods—including, interviews, focus groups, and text analyses—offer potentially richer data than quantitative methods and may be the only way to analyze certain phenomena. For example, a wide range of cognitive tests exist to help

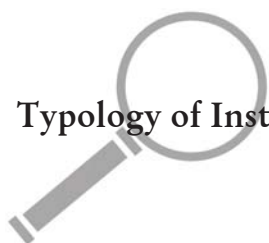
us pinpoint students' intellectual development, but these tests give very little insight into the cognitive processes of students' intellectual life. The think-aloud protocol, described by Lendol Calder and Sarah-Eva Carlson, allows us to see *how* students think or make meaning—something a test of cognition cannot do. Qualitative methods are frequently more time consuming, more difficult to implement, and more difficult to analyze than quantitative assessment strategies. Yet they are valuable, because they help us answer questions not addressed through survey research or to explain why certain outcomes are reported through quantitative assessments.

The standardized assessments reviewed here focus on a narrow range of experiences, outcomes, or behaviors. As noted above, some may be customized with the addition of institution-specific questions. On the other hand, the qualitative methods explored here can be adapted to a wide range of situations beyond those described in these essays. The flexibility of such methods is exciting.

Both quantitative and qualitative approaches have a place in the assessment arsenal, and institutions and program and course administrators would be wise to use a carefully selected set of both types when developing assessment programs.

Moving Forward with Assessment

The essays collected here introduce readers to many valuable survey instruments that can be used to investigate critical issues in the first college year. They also highlight campus-specific approaches that can be adapted widely. In no way, is this collection intended to serve as the last word on assessment in the first year of college. We continue to depend on practitioners to develop and refine assessment methodology and to share their work with others. This continual focus on assessment of the first college year can only serve to improve the learning and success of entering students on all our campuses.



Typology of Instruments for Assessment of the First College Year

Randy L. Swing

Types of Instruments Pre-Enrollment/Baseline Data

These surveys are administered in high school, during the college admissions process, or during new student orientation. Survey participants report their expectations, impressions, goals, and/or hopes for the college experience or they report their pre-enrollment behaviors and experiences. These surveys

- Provide baseline data, telling us who our students are at the point of entry
- Form gain scores when matched with posttests
- Provide covariates and controls for advanced statistical evaluations

Surveys of Outcomes and Experiences in the First College Year

These surveys are designed for use near the end of the first college year and collect a multi-perspective report about collegiate experiences. There are only three national instruments designed just for use at the end of the first year, and each has been developed within the last five years as part of The Pew Charitable Trusts' accountability agenda for higher education. The intended timing of these surveys is their common link, but otherwise the three instruments are very different in that one is designed just for use in community colleges, one only for use at four-year institutions, and one can be used at two- or four- year institutions. Two of the instruments (one for two-year institutions and one for four-year institutions) focus on student engagement with higher education in terms of how students spend their time. The other instrument collects a wide array of student opinions, beliefs, and behaviors. One instrument is designed to assess both first-year and senior students, another is designed as a post-test when combined with a matching survey at the college entry point, and the third survey is not specifically designed as a repeat measure.

General Surveys of Student Behavior, Attitudes, Study Skills, Satisfaction, & Experiences

These surveys take a holistic approach by collecting information on a variety of college experiences and environments. Examples of topics include

- "Average time" spent on academic and co-curricular tasks
- Frequency of contact with peers, faculty, and staff
- Self-reported gains in knowledge and self-confidence
- Study skills such as time management or note-taking
- Satisfaction with college

- Alcohol/drug use
- Life management skills (e.g., relationships with roommate, parents, partners)

Surveys of Specific Services/Units/Programs

These surveys investigate a particular slice of the college experience with a series of narrowly drawn and specific questions about the full range of a given service, unit, or program. Instruments may include demographic and self-report questions so that opinions can be disaggregated. Examples of available instruments include those focused on:

- Academic advising
- Residence life
- Campus student unions
- First-year seminars

Surveys of Specific Populations

Surveys in this group primarily provide information to evaluate the experiences, satisfaction, or behaviors of a specific group of students. The focus is on understanding the specific group, cohort, or sub-population. Examples of sub-populations include:

- Adult learners
- Fraternity or sorority members
- Non-returning students

Placement and Academic Knowledge Surveys/Tests

These instruments are designed to test academic knowledge and skills. Unlike opinion and satisfaction surveys, these instruments usually have a right answer and the student is judged on his/her ability to select the best (right) answer. Some instruments contain a mix of discipline topics, but it is more common for tests to be designed to measure one specific knowledge domain. The use of these instruments may vary depending on the timing of the test. For example:

- Surveys given during new-student orientations are often designed to place students in the appropriate level of college courses based on knowledge at the point of admissions.
- Surveys given in the sophomore/junior year may serve as formative evaluation of progress or be “gateways” to a major.
- Surveys given in the senior year may serve as summative evaluation or as a posttest of institutional effectiveness.

In addition to knowledge testing, students may also be asked to self-report their gain in academic skills.

Instruments Sorted by Type

- A. Pre-Enrollment/Baseline Data
 - CSXQ – College Student Expectations Questionnaire (Kuh, Indiana)
 - CSI – College Student Inventory Form A & Form B (Noel-Levitz)
 - CIRP – The Freshman Survey (Astin, UCLA)
 - Entering Student Survey (ACT)
 - Student Needs Assessment Questionnaire (ACT)
 - Survey of Current Activities and Plans (ACT)
 - Survey of Postsecondary Plans (high school version) – (ACT)

- B. Surveys of Outcomes and Experiences in the First College Year
 - College Student Report – NSSE – National Survey of Student Engagement (Kuh, Indiana)
 - * also a survey of seniors
 - CCSSE – Community College Survey of Student Engagement (McClenney, University of Texas)
 - Your First College Year (Sax, UCLA) – posttest to CIRP

- C. General Surveys (Behavior, Attitudes, Study Skills, Satisfaction, & Experiences)
 - College Outcomes Survey (ACT)
 - CSEQ – College Student Experiences Questionnaire (Kuh, Indiana)
 - College Student Needs Assessment Survey – (ACT)
 - CSS – College Student Survey (Astin, UCLA)
 - CSFI – College Success Factors Index (Ombudsman Press)
 - CCSEQ – Community College Student Experiences Questionnaire (Murrell, Memphis)
 - Core Alcohol and Drug Survey (Core Institute)
 - Faces of the Future (ACT / American Association of Community Colleges)
 - Institutional Priorities Survey—four-year and community / junior college versions (Noel-Levitz)
 - LASSI – Learning and Study Strategies Inventory (Weinstein)
 - PEEK – Perceptions, Expectations, Emotions, and Knowledge about Campus (Weinstein)
 - RSVP – Student Retention Survey—four-year and two-year versions (Harris International)
 - SACQ – Student Adaptation to College Questionnaire (Western Psychological Services)
 - Student Development Task and Lifestyle Assessment (Student Development Associates)
 - Student Opinion Survey – (ACT)
 - SSI – Student Satisfaction Inventory—four-year and community / junior college versions (Noel-Levitz)
 - Survey of Student Opinions (ACT)
 - Study of College Health Behaviors (Harvard School of Public Health)
 - TheHealthSurvey (Outside The Classroom)

- D. Surveys of Specific Services/Units/Programs
 - ACUHO-I Resident Halls (EBI & Association of College and University Housing Officers – International)

- College Student Unions (EBI & Association of College Unions – International)
 - Developmental Academic Advising (DAI)
 - Financial Aid Services – (ACT)
 - FYI – First Year Initiative Benchmarking (EBI)
 - LCEQ36 – Learning Community Effectiveness Survey (Indiana)
 - Survey of Academic Advising – (ACT)
- E. Surveys of Specific Populations
- Adult Learner Needs Assessment Survey (ACT)
 - Adult Student Priorities Survey (Noel-Levitz)
 - Fraternity Survey and Sorority Survey (EBI)
 - Withdrawing/Nonreturning Student Survey (short & long forms) (ACT)
- F. Placement and Academic Knowledge Surveys/Tests
- Academic Profile (long & short forms) (ETS)
 - Accuplacer & Companion (College Board)
 - ASSET (ACT)
 - California Critical Thinking Dispositions Inventory (California Academic Press)
 - California Critical Thinking Skills Test (California Academic Press)
 - College BASE (Missouri)
 - College Placement Test (College Board, CPT)
 - Collegiate Assessment of Academic Proficiency (CAAP)
 - COMPASS/ESL (ACT)
 - Cornell Critical Thinking Test (Critical Thinking Press & Software)
 - Watson-Glaser Critical Thinking Appraisal (Psychological Corporation)

Instruments Sorted Alphabetically

Academic Profile (long & short forms)	Section F
Accuplacer & Companion.....	Section F
ACUHOI Resident Hall Benchmarking.....	Section D
Adult Learner Needs Assessment Survey.....	Section E
Adult Student Priorities Survey.....	Section E
ASSET	Section F
California Critical Thinking Dispositions Inventory	Section F
California Critical Thinking Skills Test.....	Section F
College BASE.....	Section F
College Outcomes Survey.....	Section C
College Placement Test.....	Section F
CSXQ – College Student Expectations Questionnaire	Section A
CSEQ – College Student Experiences Questionnaire.....	Section C
College Student Needs Assessment Survey	Section C
College Student Report (National Survey of Student Engagement)	Section B
CSS – College Student Survey	Section C
CSI – College Student Inventory Form A & Form B	Section A
College Student Unions.....	Section D
CSFI – College Success Factors Index	Section C
Collegiate Assessment of Academic Proficiency	Section F
CCSEQ – Community College Student Experiences Questionnaire	Section C
CCSSE – Community College Survey of Student Engagement	Section B
COMPASS/ESL	Section F
CIRP – Cooperative Institutional Research Program The Freshman Survey	Section A
Core Alcohol and Drug Survey	Section C
Cornell Critical Thinking Test	Section F
Developmental Academic Advising.....	Section D
Entering Student Survey	Section A
Faces of the Future	Section C
Financial Aid Services	Section D
FYI – First Year Initiative Benchmarking.....	Section D
Fraternity Survey	Section E
Freshman Survey (see CIRP)	Section A
Institutional Priorities Survey	Section C
LASSI – Learning and Study Strategies Inventory.....	Section C
LCEQ36 – Learning Community Effectiveness Survey.....	Section D
National Survey of Student Engagement (see College Student Report).....	Section B

PEEK – Perceptions, Expectations, Emotions & Knowledge about College	Section C
RSVP – Student Retention Survey	Section C
Sorority Survey	Section E
SACQ – Student Adaptation to College Questionnaire	Section C
Student Development Task and Lifestyle Assessment	Section C
Student Needs Assessment Questionnaire	Section A
Student Opinion Survey	Section C
SSI – Student Satisfaction Inventory	Section C
Study of College Health Behaviors	Section C
Survey of Academic Advising	Section D
Survey of Current Activities and Plans	Section A
Survey of Postsecondary Plans (high school version)	Section A
Survey of Student Opinions	Section C
TheHealthSurvey	Section C
Withdrawing / Nonreturning Student Survey	Section E
Watson-Glaser Critical Thinking Appraisal	Section F
YFCY – Your First College Year	Section B

Section A: Pre-Enrollment/Baseline Data

CSXQ – College Student Expectations Questionnaire

Sponsoring Organization: Center for Postsecondary Research, Indiana University Bloomington, 1900 East 10th Street, Eigenmann Hall 419, Bloomington, IN 47406-7512. (812) 856-5825.

Contact: George Kuh

Cost: \$0.75 per test booklet, \$125.00 set-up fee per administration, plus \$1.50 per returned survey

Key Features: Survey of student experiences in college. Includes student self-reported gains. Features curricular and co-curricular activities.

Web Address: www.indiana.edu/~cseq/csxq_generalinfo.htm

Other Notes: Can be matched to CSEQ to compare expectations and experiences

College Student Inventory

Sponsoring Organization: USAGroup, Noel-Levitz, 2101 ACT Circle, Iowa City, IA 52245-9581. (800) 876-1117.

Principal Investigator: Michael L. Stratil, Noel-Levitz Retention Management System

Cost: \$2.00 per reusable booklets each. \$4.70 to \$6.20 per answer sheet (includes processing and reports), based on number used. \$7.25 each for online version, plus \$60.00 set-up fee.

Key Features: Intended to be part of an early warning program. Based on self-report of academic readiness and attitudes. Detailed background questions.

Web Address: www.noellevitz.com/solutions/retention/rms_csi/index.asp

Other Notes: Is marketed as part of a retention management system that includes guides for advisors and special reports.

CIRP – The Freshman Survey

Sponsoring Organization: Higher Education Research Institute, Cooperative Research Program at the University of California – Los Angeles. Moore Hall, Box 951421, University of California – Los Angeles, Los Angeles, CA 90095-1521. (310) 825-1925.

Contact: Linda J. Sax

Cost: \$400.00, plus \$1.50 per survey returned (fall 2003). \$1.00 per survey returned after first 1,000 surveys.

Key Features: Designed to survey entering college freshmen. Norm groups built from schools with 85% participation rates. Started in 1966 – the oldest data set on college freshmen. Longitudinal data is a strength. Institutions administer the survey on campus and return them for processing.

Web Address: www.gseis.ucla.edu/heri/freshman.htm

Other Notes: May be combined with data from the Your First College Year (YFCY) survey to form a pre- and post-test of the first college year

Entering Student Survey

Sponsoring Organization: ACT, ESS Customer Services, ACT, P.O. Box 1008, Iowa City, IA 52243-1008. (319) 337-1893.

Cost: \$16.00 per 25, \$65.00 institutional fee, \$0.95 per form scanned

Key Features: Measures reasons for attending and selecting current college, extracurricular activities desired, and perceptions of selected factors that influenced college selection

Web Address: www.act.org/ess/postsec.html

Other Notes: Space for 30 institutionally defined questions. National data available for comparison with local results.

Student Needs Assessment Questionnaire

Sponsoring Organization: ACT, ESS Customer Services, ACT, P.O. Box 1008, Iowa City, IA 52243-1008. (319) 337-1893.

Cost: \$16.00 per 25, \$65.00 institutional fee, \$0.95 per form scanned

Key Features: Measures life goals, growth and development issues, and high school academic needs

Web Address: www.act.org/ess/second.html

Other Notes: This instrument is for use with high school students. A companion survey is designed for college students. Could be used in a K-12/College collaboration project.

Survey of Current Activities and Plans

Sponsoring Organization: ACT, ESS Customer Services, ACT, P.O. Box 1008, Iowa City, IA 52243-1008. (319) 337-1893. (Select "ESS" on automatic answering system.)

Cost: \$16.00 per 25, \$65.00 set-up fee, \$0.95 per form scanned

Key Features: Measures impressions of the institution, sources of information, college selection plans, and educational objectives

Web Address: www.act.org/ess/postsec.html

Other Notes: The stated goal of this survey is to collect information on students who were admitted but did not enroll. Could also be used with pre-admission populations or with first-year students.

Survey of Postsecondary Plans

Sponsoring Organization: ACT, ESS Customer Services, ACT, PO Box 1008, Iowa City, IA 52243-1008. (319) 337-1893 - select "ESS" on automatic answering system.

Cost: \$16.00 per 25, \$65.00 set-up fee, \$0.95 per form scanned

Key Features: Measures high school student plans for college or work, reasons for continuing education, impressions of selected college, reasons for selecting a college, and sources of information about selected college

Web Address: www.act.org/ess/postsec.html

Other Notes: Aimed at pre-enrollment timing. Could be used as a pre-test or as part of a K-12 college initiative.

Section B:

Surveys of Outcomes and Experiences in the First College Year

The College Student Report – National Survey of Student Engagement

Sponsoring Organization: Center for Postsecondary Research, Indiana University Bloomington, 1900 East Tenth Street, Eigenmann Hall Suite 419, Bloomington, IN 47406-7512. (812) 856-5824.

Contact: George Kuh

Cost: \$300.00 institutional participation fee, plus a survey fee based on size of institution: <4,000 = \$3,150; 4,000 – 15,000 = \$4,900; >15,000 = \$7,000. Fee includes a set sample size; however, additional students may be surveyed for \$1.50 (web), \$1.50 paper survey with local collection, or \$7.00 (mailed paper survey).

Key Features: Sample selection by NSSE. Mail and/or web versions available.

Web Address: www.indiana.edu/~nsse/

Other Notes: Similar to the CSEQ in content, but a structured sampling method assures comparable scores across institutions. Comparative data with similar institutions. Sample includes first-year students and seniors. First national report released November 13, 2000.

Community College Survey of Student Engagement

Sponsoring Organization: Community College Leadership Program, The University of Texas at Austin, George I. Sanchez Building, Suite 350A Austin, Texas 78712-1293. (512) 471-6807.

Contact: Kay M. McClenney

Cost: Based on institutional size, 1,500 – 4,499 = \$4,500.00, 4,500 – 7999 = \$6,000.00, 8,000 – 14,999 = \$7,500. 15,000 or more = \$9,000. Fees include set sample sizes, but additional students may be surveyed. The cost of additional surveys varies depending on type of survey administration.

Key Features: Measures learning-centered indicators of quality for community colleges. Serves as a benchmarking instrument, establishing national norms for educational practice and performance by community and technical colleges; a diagnostic tool, identifying areas in which a college can enhance students' educational experiences; and a monitoring device, documenting and improving institutional effectiveness over time.

Web Address: www.ccsse.org

E-mail: info@ccsse.org

Other Notes: First Open administration was Spring 2001.

Your First College Year

Sponsoring Organization: The Policy Center for the First Year of College and Higher Education Research Institute at UCLA, Moore Hall, Box 951521, University of California Los Angeles, Los Angeles, CA 90095-1521. (310) 825-1925. Funding by The Pew Charitable Trusts.

Contact: Linda J. Sax

Cost: 2003 participation fee \$450.00, plus \$2.00 for each returned survey

Key Features: Matches with the CIRP Freshman Survey to create a measure of gain/ change during the first college year. Local administration with paper and/or web options.

Web Address: www.gseis.ucla.edu/heri/yfcy

Other Notes: Spring 2002 was the first full administration, following two years as a pilot instrument.

Section C

General Surveys: Student Behavior, Attitudes, and Experiences

College Outcomes Survey

Sponsoring Organization: ACT, ESS Customer Services, ACT, P.O. Box 1008, Iowa City, IA 52243-1008. (319) 337-1893 - select "ESS" on automatic answering system.

Cost: \$16.00 per 25, \$65.00 set-up fee, \$0.95 per form scanned

Key Features:

Student self-report of gains, personal growth, social growth, cognitive achievement, basic skills knowledge acquisition, time allocations to work and study, perceived contributions of college to gains, satisfaction with college.

Web Address: www.act.org/ess/postsec.html

E-Mail: outcomes@act.org

Other Notes: Space for 30 additional questions. Small space for one open-ended question. National data available for comparison with local results. Often used in community colleges as an end-of-second-year exit exam.

CSEQ - College Student Experiences Questionnaire

Sponsoring Organization: Center for Postsecondary Research, Indiana University 1900 East 10th Street, Eigenmann Hall 419, Bloomington, IN 47406-7512. (812) 856-5825.

Contact: George Kuh

Cost: \$0.75 per test booklet, \$125.00 set-up fee, plus \$1.50 per returned survey

Key Features: Survey of student experiences in college. Based on the "quality of effort" work of Robert Pace. Includes self-reported gains in academic skills.

Web Address: www.indiana.edu/~cseq/

Other Notes: Can be matched to CSXQ to determine the difference between expectations and experiences. Web version also available. See also the CCSEQ for community colleges.

College Student Needs Assessment Survey

Sponsoring Organization: ACT, ESS Customer Services, ACT, P.O. Box 1008, Iowa City, IA 52243-1008. (319) 337-1893.

Cost: \$16.00 per 25, \$65.00 institutional fee, \$0.95 per form scanned

Key Features: Goals for college, life goals, career development, educational planning, life and intellectual skills

Web Address: www.act.org/ess/postsec.html

Other Notes: Room for 30 additional questions and space for open-ended response to the question: "If you wish to make any comments or suggestions concerning this college, write them on the lines below."

CSS - College Student Survey

Sponsoring Organization: Higher Education Research Institute, Cooperative Research Program, Moore Hall, Box 951421, University of California – Los Angeles, Los Angeles, CA 90095-1521. (310) 825-1925.

Contact: Alexander Astin

Cost: \$450.00, plus \$2.00 per survey returned

Key features: Can be used as a senior survey or general student survey. Data can be linked to Freshman Survey (CIRP) student responses. Institutions administer the survey to students and return them to HERI for processing.

Web Address: www.gseis.ucla.edu/heri/css.htm

College Success Factors Index

Sponsoring Organization: Ombudsman Press, Inc., 6938 Merrywood Court, Granite Bay, CA 95746. (916) 791-9290.

Contact: Ed Hallberg

Cost: call 800-400-7609 for quote

Key Features: Measures control/responsibility, competition, task precision, expectations, wellness, time management, college involvement, and family/other involvement. Can be used as early warning or for self-assessment. Self-scoring. Web form available from Wadsworth Publishing

Web Address: www.schoolsuccesscentral.com or www.csfi-wadsworth.com

Community College Student Experiences Questionnaire

Sponsoring Organization: Center for the Study of Higher Education, The University of Memphis, Memphis, TN 38152. (901) 678-2775.

Contact: Patricia H. Murrell

Cost: Test booklet/answer form \$0.75, scoring per form \$1.50, diskette and printout \$125.00.

Key Features: Measures student quality of effort. Built from the work of Robert Pace. This is the community college version of the CSEQ.

E-Mail: ccseqlib@Memphis.edu

Web Address: www.people.Memphis.edu/~coe_cshe/ccseq_main.htm

Core Alcohol and Drug Survey

Sponsoring Organization: Core Institute, Center for Alcohol and Other Drug Studies, Southern Illinois University at Carbondale, Carbondale, Illinois 62901 (618) 453-4366.

Cost: \$0.20 per survey form, plus \$0.04 shipping per form. Tabulation costs vary, starting at \$50.00 for a standard cross-tabulation report.

Key Features: Questions focus on student perceptions and opinions about alcohol and other drugs, and their use of alcohol and drugs. The instrument can be used as a pre/posttest to evaluate the effectiveness of prevention programs. National norms are available.

Web Address: www.siu.edu/departments/coreinst/public_html/index.html

Faces of the Future

Sponsoring Organization: ACT and American Association of Community Colleges

Contact: Kent A. Phillippe

Cost: \$16.00 per 25, \$65.00 institutional fee, \$0.95 per form scanned

Key Features: Especially designed for community colleges and technical schools. Measures reasons for attending this college, satisfaction with the college, impression of the campus climate, and areas of growth while at the college

Web Address: www.act.org/ess/postsec.html

Institutional Priorities Survey (Two versions)

Sponsoring Organization: Noel-Levitz, 2101 ACT Circle, Iowa City, IA 52245-9581. (800) 867-1117.

Cost: Set-up fee \$150.00, cost per form varies based on quantity: \$1.50 each for 2,500 or more; \$1.75 each for 1,000-2,499; \$1.95 each for 100-999; \$2.95 each for 1 to 99

Key Features: Measures "level of importance" compared to "level of satisfaction." Available in a four-year version and a community, junior, and technical college version

Web Address: www.noellevitz.com/solutions/retention/satisfaction/ips/index.asp

Learning And Study Strategies Inventory (LASSI)

Sponsoring Organization: H&H Publishing Company, Inc. 1231 Kapp Drive, Clearwater, Florida 33765-2116. (800) 366-4079.

Contact: Claire Weinstein

Cost: \$2.75 each for 100 or more, \$3.20 each for 1 to 99

Key Features: Gathers information about student study patterns. Can be used as a diagnostic measure, counseling tool, pre/posttest of an intervention, or part of a retention management program. Self scoring. Electronic version available.

Web Address: www.hhpublishing.com/_assessments/LASSI/index.html

PEEK

Sponsoring Organization: H&H Publishing Company, Inc., 1231 Kapp Drive, Clearwater, Florida 33765-2116. (800) 366-4079.

Contact: Claire Weinstein

Cost: \$1.25 each for 100 or less if institution scans and scores, \$1.75 each if H&H scans and scores. Discount for 500 or more surveys.

Key Features: Thirty questions long. Available in web-based and disk-based forms. Results allow institutions to target intervention programs to high-risk students. Measures academic, personal, and social dimensions of the college experience.

Web Address: www.hhpublishing.com/_assessments/PEEK/index.html

Student Adaptation to College Questionnaire

Sponsoring Organization: Western Psychological Services, 12031 Wilshire Blvd., Los Angeles, CA 90025-1251. (800) 648-8857.

Cost: pack of 25 (hand scored) - \$39.50. Mail-in answer sheets \$13.00 each, 25-user disk version - \$180.00

Key Features: Measures academic adjustment, personal-emotional adjustment, social adjustment, and attachment to the institution. Can be used as an early warning test. Research shows that the results encourage those in need to seek counseling help.

Web Address: <https://www-secure.earthlink.net/www.wpspublish.com/Inetpub4/catalog/W-228.htm>

Student Developmental Task and Lifestyle Assessment

Sponsoring Organization: Student Development Assessment, Inc., PMB 500, 2351 College Station Road, Athens, GA 30605-3664.

Cost: Site license options \$1,000 for 12 months. Special graduate student research pricing.

Key Features: Measures three vectors of personal development (a) establishing and clarifying purpose, (b) developing autonomy, and (c) establishing mature interpersonal relationships. Each task has subtasks that are scored independently. Can be used as a pre/posttest to measure change.

Web Address: www.geocities.com/studevassoc/SDTLALINK.htm

Student Opinion Survey (Four-year & two-year versions)

Sponsoring Organization: ACT, ESS Customer Services, ACT, P.O. Box 1008, Iowa City, IA 52243-1008. (319) 337-1893 - select "ESS" on automatic answering system.

Cost: \$16.00 per 25, \$65.00 set-up fee, \$0.95 per form scanned

Key Features: Pairs "usage" of college services with "satisfaction" for each satisfaction score. Collects student opinion about academics, admissions, rules and policies, facilities, registration, and general college experiences.

Web Address: www.act.org/ess/postsec.html

Other Notes: Space for 30 additional questions. One open-ended question: "If you wish to make any comments or suggestions concerning this college, please write them on the lines below." National data available for comparison with local results.

Student Satisfaction Inventory

Sponsoring Organization: USAGroup, Noel-Levitz, 2101 ACT Circle, Iowa City, IA 52245-9581. (800) 876-1117.

Cost: Processing /set-up fee \$50.00, plus \$1.50 each for 2,500 or more; \$1.75 each for 1,000 to 2,499; \$1.95 each for 100 to 999; and \$2.25 each for online administration.

Key Features: Designed for annual use. Asks students to rate the importance of services and their satisfaction with those services. Creates a scale of “meets, exceeds, falls below expectations” For use with students who have experience on the campus (end of year first-year students, sophomores, juniors, and seniors)

Web Address: www.noellevitz.com/solutions/retention/satisfaction/ssi/index.asp

Study of College Health Behaviors

Sponsoring Organization: Harvard School of Public Health, 677 Huntington Ave, Boston, MA 02115. (301) 652-1558.

Cost: \$6,000.00 for basic survey package, including surveys for 750 students.

Key Features: Related to the College Alcohol Study, but looks at a broader set of behaviors including: alcohol use, tobacco use, illicit drug use, stress, mental health, sleep, sexual health, physical activity and weight control, motor vehicle safety, and use of health services. Administered via the web.

Web Address: www.hsph.harvard.edu/cas/chb/

Notes: This is a new survey for 2004.

Survey of Student Opinions

Sponsoring Organization: ACT, ESS Customer Services, ACT, PO Box 1008, Iowa City, IA 52243-1008. (319) 337-1893 - select “ESS” on automatic answering system.

Cost: \$16.00 per 25, \$65.00 set-up fee, \$0.95 per form scanned

Key Features: Focuses on college services and college environments. Compares “importance” and “satisfaction.” for each item. More demographics than other ESS forms. This is the newest survey in the series (copyright 2002). For use with students who have had experience with a campus, because they are asked to rate experiences with campus units and services.

Web Address: www.act.org/ess/postsec.html

Other Notes: Space for 30 additional questions. One open-ended question: “If you wish to make any comments or suggestions concerning this college, please write them on the lines below.”

TheHealthSurvey

Sponsoring Organization: Outside The Classroom, 385C Elliot Street, Newton, MA 02464. (617) 641-2001.

Cost: \$750.00 participation fee, plus \$0.35 to \$0.40 per survey form.

Key Features: Survey contains items about alcohol, tobacco, and other drugs; sexual behavior; sexual assault; eating patterns and disorders; and mental health. Outside The Classroom will survey a random sample of all students, or institutions may survey only special populations such as only first-year students.

Web Address: www.outsidetheclassroom.com

Other Notes: Up to 10 custom questions can be added to the survey.

Section D: Surveys of Specific Services/Units/Programs

ACUHO-I/EBI Resident Satisfaction Survey

Sponsoring Organization: Association of College & University Housing Officers International and Educational Benchmarking, Inc. 1630 W. Elfindale, Springfield, MO 65807. (417) 831-1810.

Contact: Joe Pica and Glen Detrick

Cost: \$1,050 for up to 500 surveys. \$0.25 per additional survey

Key Features: Measures resident student satisfaction, assessment of resident advisor/assistant performance, facilities, dining services, alcohol use, future plans

Web Address: www.webebi.com/Housing/Resident/Resident.htm

E-Mail: info@webebi.com

Other Notes: Has space for 10 institutionally defined questions. Institution sets housing code to identify building and floor/wing.

College Student Unions

Sponsoring Organization: Association of College Unions – International and Educational Benchmarking, Inc. 1630 W. Elfindale, Springfield, MO 65807. (417) 831-1810

Contact: Glen Detrick and Joe Pica

Cost: \$995.00 for 500 surveys

Key Features: Measures satisfaction with college union facilities and programs, student use of the college union, food services in the college union, and assesses bookstore.

Web Address: www.webebi.com/Unions/CollegeUnionStudentCenter/CollegeUnionStudentCenterDetails.htm

E-mail: info@webebi.com

Other Notes: Space for 10 institutionally defined questions.

Developmental Academic Advising Inventory

Sponsoring Organization: Developmental Academic Advising Inventory, Inc. P.O. Box 1946, Paradise, CA 95967. (530) 872-0511.

Cost: Based on quantity and usage agreement - \$1.00 and up. Special pricing for research use.

Key Features: Web and paper forms. Includes scales for intellectual, life planning, social, physical, emotional, sexual, cultural, spiritual, and political. Can be used in advising settings or other student development programs.

Web Address: daiassess.com/introduction.htm

E-mail: gdickson@sunset.net

Financial Aid Services

Sponsoring Organization: ACT, ESS Customer Services, ACT, P.O. Box 1008, Iowa City, IA 52243-1008. (319) 337-1893 - select "ESS" on automatic answering system.

Cost: \$16.00 per 25, \$65.00 set-up fee, \$0.95 per form scanned

Key Features: Is a general assessment of financial aid procedures, staff, publications, and results. Collections demographic data and has space for up to 30 additional items

Web Address: <http://www.act.org/ess/postsec.html>

First Year Initiative (Benchmarking Survey)

Sponsoring Organization: Policy Center on the First Year of College and Educational Benchmarking, Inc. 1630 W. Elfindale, Springfield, MO 65807. (417) 831-1810.

Contact: Glen Detrick and Joe Pica

Key Features: Specially designed to assess learning outcomes from first-year seminars. Uses a benchmarking process which provides comparative data.

Cost: \$695.00 for 250 surveys, \$.35 per additional survey

Web Address: <http://www.webebi.com/University/FYI/Index.htm>

Other Notes: The first pilot of the instrument was conducted during Spring 2001.

LCEQ36 –Learning Communities Experience Questionnaire

Sponsoring Organization: Indiana State University, Office of Strategic Planning and Institutional Research and Effectiveness, 200 North Seventh Street, Terre Haute, IN 47809-9989. (812) 237-7778.

Contact: Kevin J.G. Snider and Ann M. Venable

Cost: Free with permission

Key Features: Has both pretest and posttest versions. Assesses learning communities and first-year seminars. Scales include: student-student collaboration, faculty-student collaboration, academic involvement, perspectivism, cooperative learning, linking academic and life experience, and interdisciplinary learning. Covers behavioral, cognitive, and motivational learning domains.

Web Address: web.indstate.edu/oirt/lce36/1999Study/

Other Notes: See web site for a PowerPoint presentation on the first year's study.

Survey of Academic Advising

Sponsoring Organization: ACT, ESS Customer Services, ACT, PO Box 1008, Iowa City, IA 52243-1008. (319) 337-1893 - select "ESS" on automatic answering system.

Cost: \$16.00 per 25, \$65.00 set-up fee, \$0.95 per form scanned

Key Features: Compares advising services received and satisfaction with services. Measures impressions of academic advisor. Can be used with "professional" advisors and faculty advisors. Room for 30 institutionally defined questions. Contains some student behavioral questions about use of advising services.

Web Address: www.act.org/ess/postsec.html

Other Notes: Contains an open-ended question: "If you wish to make any comments or suggestions concerning this college or its advising program, please use the lines provided below." National data available for comparison with local results.

Section E: Surveys of Specific Populations

Adult Learner Needs Assessment Survey

Sponsoring Organization: ACT, ESS Customer Services, ACT, PO Box 1008, Iowa City, IA 52243-1008. (319) 337-1893

Cost: \$16.00 per 25, \$65.00 institutional fee, \$0.95 per form scanned

Key Features: Aimed at point of entry, but could be used for enrolled students. Asks about work, family support, and college financing. Major divisions include: life skill development, career development, educational planning, and relationships with others.

Web Address: www.act.org/ess/postsec.html

Adult Student Priorities Survey

Sponsoring Organization: USAGroup, Noel-Levitz, 2101 ACT Circle, Iowa City, IA 52245-9581. (800) 876-1117.

Key Features: Designed especially for adult students. Compares opinion of “importance” compared with “satisfaction.” For students 25 years and older.

Web Address: www.noellevitz.com/solutions/retention/satisfaction/asps/index.asp

Fraternity & Sorority Survey

Sponsoring Organization: Educational Benchmarking, Inc. 1630 W. Elfindale, Springfield, MO 65807. (417) 831-1810.

Contact: Glen Detrick and Joe Pica

Cost: \$1.00 per student for up to 3,500 students, minimum of 2,000. \$0.50 per student for next 3,501 – 8,500 students, \$0.35 per student for next 8,500 students

Key Features: Measures Greek life, Greek advantages, self-reported gains from membership, fraternity house issues, national/international services, chapter programming, food services, alcohol use.

Web Address: www.webebi.com/AFA_Fraternity_Sorority/National_index.htm

Withdrawing/Nonreturning Student Survey (long form)

Sponsoring Organization: ACT, ESS Customer Services, ACT, P.O. Box 1008, Iowa City, IA 52243-1008. (319) 337-1893 - select “ESS” on automatic answering system.

Cost: \$16.00 per 25, \$65.00 set-up fee, \$0.95 per form scanned

Key Features: Major and minor reasons for leaving college: personal, academic, institutional, financial, and employment-related. Also collects future educational plans, satisfaction with college services and college characteristics.

Web Address: www.act.org/ess/postsec.html

Other Notes: Room for 30 institutionally defined questions. Open-ended question: “If you wish to make any comments or suggestions concerning the college, please write them on the lines below.”

Withdrawing/Nonreturning Student Survey (short form)

Sponsoring Organization: ACT, ESS Customer Services, ACT, P.O. Box 1008, Iowa City, IA 52243-1008. (319) 337-1893

Cost: \$11.50 per 25, \$65.00 institutional fee, \$0.95 price per form scanned

Key Features: Major and minor reasons for leaving college: personal, academic, institutional, financial, and employment-related. Also collects future educational plans, satisfaction with college services and college characteristics.

Web Address: www.act.org/ess/postsec.html

Other Notes: Room for 20 institutionally defined questions.

Section F: Placement and Academic Knowledge Surveys/Tests

Academic Profile (standard form)

Sponsoring Organization: The College Board & Educational Testing Service (ETS) 55-L Educational Testing Service, Princeton, NJ 08541. (609) 921-9000. (800) 745-0269.

Cost: \$375.00 annual institutional fee, plus min. order 100. quantities of 25, \$15.50 each, volume pricing on individual bases.

Optional Essay - \$3.50 no additional charge if scored by local institution using ETS manual. \$14.00 if scored by ETS.

Key Features: Takes two hours to administer 108 questions. Measures reading, writing, mathematics, and critical thinking. Measurements in the context of the humanities, social science, and natural sciences—not recall of specific information. Seven norm referenced scores (i.e., reading, writing, mathematics, critical thinking, humanities, social science, and natural science). Norms for institution and national users. Criterion-referenced in skill areas. Three levels for each skill (i.e., writing, reading, and mathematics). Both individual and group scores are reported.

Web Address: www.ets.org/hea/acpro/benefits.html

Other Notes: See also the abbreviated form.

Academic Profile (abbreviated form)

Sponsoring Organization: The College Board & Educational Testing Service (ETS) 55-L Educational Testing Service, Princeton, NJ 08541. (609) 921-9000. (800) 745-0269.

Cost: \$375.00 annual institutional fee. 100 min. order, packages of 25, \$13.50 each

Key Features: Takes about 40 minutes to administer each unit of 36 questions. Measures reading, writing, mathematics, and critical thinking. Measurements in the context of the humanities, social science, and natural sciences—not recall of specific information. Seven norm referenced scores (i.e., reading, writing, mathematics, critical thinking, humanities, social science, and natural science). Norms for institution and national users. Criterion-referenced in skill areas. Three levels for each skill (i.e., writing, reading, and mathematics). The short form only produces group-level scores, no individual sub-scores.

Web Address: www.ets.org/hea/acpro/benefits.html

Other Notes: National comparative data available by Carnegie classification, student class, and self-selected institutional groups.

Accuplacer™ & Companion®

Sponsoring Organization: The College Board, 45 Columbus Avenue, New York, NY 10023. (800) 486-8497.

Cost: \$0.90 to \$1.10 per test component. Writing essay is \$3.60 to \$4.40 per essay. Discounts for Texas, Florida, Connecticut, California, Colorado, North Carolina, Massachusetts, Maryland, and Minnesota

Key Features: For placement, advisement, and guidance. Companion is the paper version and Accuplacer is the Internet version. Covers reading comprehension, sentence skills, elementary algebra, arithmetic. Essay is immediately graded using artificial intelligence and provides a holistic grade with sub-scores for focus, development, organization, and sentence structure. The Internet version must be proctored.

Web Address: www.collegeboard.com/accuplacer/html/accupla1.html

ASSET

Sponsoring Organization: 500 ACT Drive, PO Box 168, Iowa City, IA 52243. (319) 337-1376. (800) 498-6065.

Cost: \$36.75 per 25 reusable test booklets, plus \$3.55 to \$2.85 for student sets (answer & information – not reusable). Scoring includes: self scoring carbon answer set, PC scoring, and scan scoring.

Key Features: Paper and pencil placement test and advising program used by more

than 500 community and technical colleges. Academic skill placement measures in writing, reading, and mathematics with immediate advising and placement services. Optional units on study skills and interests.

Web Address: www.act.org/catalog/asset.html

Other Notes: Designed for group administrations.

California Critical Thinking Dispositions Inventory

Sponsoring Organization: California Academic Press. 217 La Cruz Avenue, Milbrae, CA 94030. (650) 697-5628.

Cost: Varies depending on number of instruments and whether scoring is included. 25 copy packages of CCTDI, \$110; 100 copy packages with scoring, \$485.

Key Features: Designed to assess individual's inclinations toward or habits of mind considered to be contributing factors to critical thinking. These include truthseeking, openmindedness, analyticity, systematicity, critical thinking self-confidence, inquisitiveness, and cognitive maturity. 75-item, 6-point Likert scale, 20 minutes to administer.

Web Address: <http://www.insightassessment.com/test-cctdi.html>

California Critical Thinking Skills Test

Sponsoring Organization: California Academic Press. 217 La Cruz Avenue, Milbrae, CA 94030. (650) 697-5628.

Cost: Varies depending on number of instruments and whether scoring is included. 25 copy packages of CCTDI, \$100; 100 copy packages with scoring, \$460.

Key Features: CCTST is based on the American Philosophical Association 1990 Delphi report consensus definition of critical thinking. 34-item multiple-choice instrument, available in parallel Forms A and B.

Web address: <http://www.insightassessment.com/test-cctdi.html>

College BASE

Sponsoring Organization: Assessment Resource Center, University of Missouri. 2800 Maguire Boulevard, Columbia, Missouri 65201. (800) 366-8232.

Cost: Prices vary by number of subjects tested and size of institution.

Key Features: Designed to assess general education/core curriculum. Each of four multiple-choice tests may be used alone. Each takes 45 minutes. A writing prompt is also available and takes 40 minutes to administer.

Web Address: arc.missouri.edu/collegebase/

Other Notes: College Base is used as a state-wide test in Missouri and tied to performance funding. It is often used as a senior/exit exam or a junior exam as the capstone of the general education experience.

Collegiate Assessment of Academic Proficiency (CAAP)

Sponsoring Organization: ACT Outcomes Assessment, PO Box 168, Iowa City, IA 52243-0168. (319) 337-1053.

Cost: (2001 fees) \$330.00 annual participation fee. 1-500 students (each taking one test area) \$11.00 each. (each taking 2-5 test areas) \$17.00. 501 – 1,500 students (each taking one test area) \$10.20 each. (each taking 2-5 test areas) \$15.70. Writing Essay Test – \$5.00 if scored locally, \$11.00 if scored by ACT (for 2000-2001 academic year)

Key Features: Writing Skills Test (72-items, 40 minutes, multiple choice), Reading Test (36-items, 40 minutes, multiple choice), Science Reasoning Test (45 items, 40 minutes, multiple choice), Mathematics Test (35 items, 40 minutes, multiple choice), Critical Thinking Test (32 items, 40 minutes, multiple choice), Writing Essay Test (Two 20-minute writing tasks).

Web Address: <http://www.act.org/caap/index.html>

E-mail: outcomes@act.org

Other Notes: National user norms available. Can be matched to ASSET and COMPASS to create a longitudinal measure of change.

COMPASS/ESL

Sponsoring Organization: ACT Customer Services, ACT, PO Box 1008, Iowa City, IA 52243-1008. (800) 645-1992. (319) 337-1054.

Cost: Computer based: \$450.00 per license, \$1.05 to \$1.30 per unit (example, one placement test + creating a student record = 1.40 unit). Institution must dedicate a PC for each license.

Key Features: Placement and diagnostic tests: Writing, Reading, Mathematics, English as a Second Language. Computer adaptive testing. Collects background/demographic data. Extensive reports for the institution and student. Immediate scoring. Non-timed tests.

Web Address: www.act.org/compass/

Other Notes: These tests were primarily developed for placement purposes

Cornell Critical Thinking Test

Sponsoring Organization: Critical Thinking Books and Software. P.O. Box 448, Pacific Grove, CA 93950. (800) 458-4849.

Cost: Set of 10 tests, \$17.99. Set of 10 answer sheets, \$8.99. Administration manual, \$8.99.

Key Features: 50-item multiple-choice, taking 50 minutes. Level Z of the test is suitable for first-year college students.

Web Address: www.criticalthinking.com/series/055/index_g.html

Other Notes: Also available in a CD version; \$39.99 for 10 students, \$1.25 for each additional test taker.

Watson-Glaser Critical Thinking Appraisal

Sponsoring Organization: The Psychological Corporation. 19500 Bulverde Rd., San Antonio, TX 78259. (800) 872-1726

Cost: Long forms (A & B): test booklets, 25 for \$130; answer documents, 25 for \$39. Short form: test booklets, \$106; answer documents, 25 for \$40.

Key Features: Form S is composed of 40 multiple-choice items and takes 45 minutes to complete. Forms A and B (alternate versions) are 80 items each and take 60 minutes. Produces a single score based on five critical thinking skills: inference, recognition of assumptions, deduction, interpretation, and evaluation of arguments.

Web Address: marketplace.psychcorp.com/PsychCorp.com/Cultures/en-US/default.htm

Other Notes: Promoted by the vendor primarily as a tool for employment applicant assessment.



About the Contributors

Taylor W. Acee Taylor W. Acee is a doctoral student in the Department of Educational Psychology at the University of Texas at Austin. His area of study is learning, cognition, and instruction. His primary research and development interests include the development of goals, the transition from high school to college and from college to work, and applications designed to help students become more strategic learners.

Catherine Anderson Catherine Anderson has served as academic advisor at the University of Mississippi's Academic Support Center for four years. In addition to her advising duties, she also coordinates the university's Absence-Based Intervention program. Anderson holds a BA in English from The University of Mississippi and an MA in English Literature from Western Kentucky University. She is currently pursuing a PhD in higher education, educational leadership at the University of Mississippi.

Karen Webber Bauer Karen Webber Bauer is director of institutional research and associate professor, Institute of Higher Education at The University of Georgia. Bauer is active in several professional associations, including the Association for Institutional Research and the Society for College and University Planning. She served as a contributor to several grants including two NSF grants on the evaluation of undergraduate research and a Pew Charitable Trust grant on problem-based learning. She has authored publications on institutional research, general education, higher education assessment, and the psychology of gender.

Marcia Belcheir Marcia Belcheir is the coordinator of institutional assessment at Boise State University in Boise, Idaho. She holds a PhD in educational measurement and evaluation from the University of Florida. Her research interests include student learning and retention.

Leonard Bliss Leonard Bliss is professor of educational research in the department of educational and psychological studies at Florida International University in Miami. He received his PhD degree from Syracuse University in educational research and statistics. His current research interests involve study and self-regulatory behaviors of high school and university students. Bliss is a co-author of the *Study Behavior Inventory*, an instrument used by many colleges and universities in the United States and other

English-speaking countries. He has also produced a Spanish language edition of the instrument, the *Inventario de Comportamiento de Estudio*. He and his students are currently working on the validation of the *Study Behavior Inventory – High School Version*, which should be available in the spring 2004.

Julie L. Bryant, senior director of retention products at Noel-Levitz, works directly with colleges and universities throughout North America in the area of satisfaction assessment. She partners with educators to determine relationships between perceptions of importance and satisfaction of students, special populations, and campus personnel. Bryant identifies ways these data can inform retention planning and be shared with the campus community. She also oversees the annual national reporting and trend analysis of these data. She is responsible for client service to more than 1,500 institutions using the Noel-Levitz family of satisfaction-priorities assessment instruments, including the Student Satisfaction Inventory™ and the Institutional Priorities Survey™.

Julie L. Bryant

Lendol Calder is associate professor of history at Augustana College, Rock Island, IL, where he is chair of the history department. Before coming to Augustana, he taught at Colby-Sawyer College in New Hampshire, the University of Washington, Seattle, and the University of Chicago, where he received his PhD in 1993. A scholar of the history of American consumerism, Calder's 1999 book *Financing the American Dream: A Cultural History of Consumer Credit* has made him a popular authority in the national media on issues related to credit and debt. As a Carnegie Scholar at the Carnegie Academy for the Scholarship of Teaching and Learning, Calder's most recent work has examined the problem of "coverage" in introductory courses in an effort to help college and university instructors teach disciplinary thinking more effectively.

Lendol Calder

Sarah-Eva Carlson is a 2002 graduate of Augustana College. A member of Phi Beta Kappa, Carlson studied history and worked as the lead research assistant on the think-aloud project described in this monograph. Carlson is now a graduate student at St. Andrews University, Scotland reading for an MLitt in international security studies.

Sarah-Eva Carlson

YoonJung Cho is a doctoral student in the Department of Educational Psychology at the University of Texas at Austin. Her area of study is learning, cognition, and instruction. YoonJung's primary research and development interests include the nature of goal orientations, the transition from high school to college and from college to work, and applications designed to help students become more strategic learners. She is also interested in cross-cultural studies and is an author of the Korean version of the LASSI-High School Version.

YoonJung Cho

- Marian Allen Claffey** Marian Allen Claffey, MEd, is the special projects administrator for the office of the provost at Loyola University Chicago, where she is also completing a PhD in higher education. Claffey has more than 20 years professional experience in academic and student affairs administration. Her appointments at Loyola have included assistant dean in the Graduate School of Arts and Sciences, project manager for accreditation and assessment in the office of the vice president for academic affairs, and associate dean in Mundelein College of Loyola, the university's adult, undergraduate college. She has presented both nationally and regionally on the topic of fairness in the academy. Claffey's research interests include organizational behavior and organizational justice in postsecondary settings. Her dissertation research will address college student perceptions of campus fairness.
- Stephanie B. Corliss** Stephanie B. Corliss is a doctoral student in the Department of Educational Psychology at the University of Texas at Austin. She is also completing a master's degree in program evaluation. Her area of study is a combined program between learning, cognition, and instruction and instructional technology. Stephanie's primary research and development interests include instructional technology, cognitive theory, and ways to use technology effectively to enhance student learning.
- Marc Cutright** Marc Cutright is an assistant professor in the department of counseling and higher education at Ohio University. He is a research fellow of The Policy Center on the First Year of College, where he previously was on staff as a research associate.
- Garrick Davis** Garrick Davis has taught first-year experience writing seminars at the California State University at Monterey Bay. He has also served as an editor of achievement tests at CTB/McGraw-Hill. His poetry and criticism have appeared in various publications.
- Teresa L. Flateby** Teresa L. Flateby is director of evaluation and testing, at the University of South Florida. Having served in that position for 13 years, she is currently directing the assessment of the Liberal Arts General Education program at USF. Serving as the university's representative regarding institutional testing to the state, she has also directed the assessment of USF's learning communities, basic mathematics coursework, first-year experience course, and has supervised a staff of eight faculty and staff. Along with E. Metzger, she is the creator of the Cognitive Level and Quality of Writing Assessment.
- Shannon K. Gilmartin** Shannon K. Gilmartin is a senior educational researcher at the Caltech Precollege Science Initiative (CAPSI) housed at the California Institute of Technology. She received her PhD in education at the University of California, Los Angeles, where she worked on the Your First College Year pilot studies. Her work explores peer relationships in

the first college year, survey methodology, and the science pipeline at middle- and high-school levels.

Robert M. Gonyea is assistant director of the College Student Experiences Questionnaire Research Program and also serves as a research analyst for the National Survey of Student Engagement (NSSE). He has presented at several national and regional conferences on CSEQ, NSSE, and his own research, which focuses on assessment of institutional quality, student expectations about college, and the contribution of student affairs to student learning. Gonyea has previously worked as a student affairs administrator at the University of San Francisco, the University of Wisconsin, and Northern Michigan University. Gonyea has a BS in psychology and a masters of labor and industrial relations from Michigan State University, and is a doctoral candidate in higher education and student affairs at Indiana University with a minor in educational inquiry.

Robert M. Gonyea

Edmond C. Hallberg is an emeritus professor of higher education and counseling at the California State University at Los Angeles. He has been a coordinator of academic advising, a dean of admissions, and a dean of students. His latest book, *Making the Dean's List*, is a textbook for first-year seminars.

Edmond C. Hallberg

Hayek is the senior associate director of the Indiana University Center for Postsecondary Research. He also manages the day-to-day operations of the National Survey of Student Engagement (NSSE). More than 425,000 students at 730 different colleges and universities have participated in the program. Hayek has written on topics related to collegiate quality and institutional effectiveness and has given numerous presentations at national conferences. In addition, he has given invited talks on topics related to improving the college experience at various staff and faculty retreats and workshops. Hayek has an economics degree from the University of Chicago and a doctorate in higher education from Indiana University.

John Hayek

Associate professor, Elizabeth Hodges has been at Virginia Commonwealth University since 1989. Her scholarly work lies in the field of composition studies. She also writes creative nonfiction and has published one book of connected essays, *What the River Means*. She is currently working on a second collection.

Elizabeth Hodges

J. Daniel House has been director of institutional research at Northern Illinois University (NIU) since 1994. He has used CIRP data for numerous assessment projects. Those results have been presented at many conferences and published in the *Journal of College Student Development*, *Research in Higher Education*, and *The Journal of Social Psychology*. He serves on the Academic Planning Council and University Assessment Panel at NIU. He has been an instructor at the Higher Education Research Institute (HERI) Summer Assessment

J. Daniel House

Workshops at UCLA since 1997. During those workshops he provides examples of how to incorporate CIRP data into a comprehensive campus assessment strategy. He earned a BS and MS in psychology at Illinois State University and a PhD in education at the University of Iowa.

Peggy Pei-Hsuan Hsieh Peggy Pei-Hsuan Hsieh is completing her doctoral studies in the Department of Educational Psychology at the University of Texas at Austin. Her area of study is learning, cognition, and instruction. Her primary research and development interests include the transition from high school to college, strategies involved in learning a foreign language, and applications designed to help students become more strategic learners.

Pamela A. Humphreys Since 1997, Pamela A. Humphreys has served as the senior College BASE coordinator at the Assessment Resource Center, University of Missouri-Columbia. She is a graduate of Truman State University and has completed post-graduate work at Mundelein College and the University of Missouri-Columbia. She comes to her current position after serving as education coordinator for national and regional medical associations where she worked in the areas of continuing medical education, accreditation, and program development. She has more than 20 years experience in health care administration with appointments in quality management initiatives and program evaluation.

Roberta Jessen Roberta Jessen has been involved with the assessment of Portland State University's university studies program since its implementation in 1994. For several years she practiced participative observational research in the classroom and published with her colleagues Cheryl Ramette and Martha Balshem. She earned a BS in psychology at Portland State University in 1987 and has nearly completed her graduate coursework in postsecondary education. Her interest has always been on the cognitive and affective process of student learning, especially as it relates to critical thinking and a caring community. She is now working as a professional academic advisor in the Academic and Support Center at Portland State under the offices of student affairs.

Angela L. Julie Angela L. Julie is a doctoral student in the Department of Educational Psychology at the University of Texas at Austin. Her area of study is learning, cognition, and instruction. She has a masters of education in teaching from the University of Texas at Arlington. She has extensive teaching experience in adult professional development, in high school mathematics, and in an undergraduate developmental education course in strategic learning. Angela's primary research and development interests include effective teacher education, professional certification, and the transfer of knowledge into classroom practice.

Cynthia A. King is a doctoral student in the Department of Educational Psychology at the University of Texas at Austin. Her area of study is learning, cognition, and instruction, and her primary research and development interests include the transition from college to work and lifelong learning. She is currently completing an internship evaluating the orientation program for first-year students in the Educational Psychology department at the University of Texas at Austin. In addition, she is helping to develop and implement a new training program for assistant instructors for an undergraduate course called, "Individual Learning Skills."

Cynthia A. King

Ned Scott Laff, PhD, is coordinator for online programs and special academic programs at Loyola University in Chicago. He has held numerous administrative positions, including assistant dean in the College of Liberal Arts at Florida Atlantic University, assistant dean for first year students at St. Lawrence University, director for university advising at Weber State University, and associate dean for curriculum at Mundelein College of Loyola University Chicago. He has taught in both English and honors courses during each of his administrative appointments. He has broad interests in liberal arts education, the quality of undergraduate education, and the role of academic advising. Laff has published and presented widely in the area of student engagement and success. He is the founder and president of the Association of Advisors of English and has been nominated as teacher and advisor of the year at the University of Illinois, St. Lawrence University, University of Northern Colorado, Florida Atlantic University, and Weber State University.

Ned Scott Laff

Lana Low is the former vice president for retention and assessment services at Noel-Levitz. She has consulted with more than 100 colleges and universities and is a frequent presenter at national and regional conferences and winner of awards for excellence in teaching, research, and academic advising. Low's background includes senior administrative appointments, direct responsibility for student services and assessment, and college teaching. She served the University of Virginia at Wise for 19 years before joining Noel-Levitz. She received her PhD in educational research and evaluation from Virginia Polytechnic Institute and State University. She has extensive experience analyzing data on first-year students, including developing predictive retention models.

Lana Low

David A. Lutz, PhD, has worked in higher education since the 1960s with a varied career in teaching, administration, and working for a nonprofit testing organization. He has taught at Drew University, Upsala College, Bucknell University, and Lycoming College. He was the dean and director of assessment for the State of Connecticut's nontraditional college, now known as Charter Oak College. He joined ACT, Inc. in 1980 and served as the national director of postsecondary services at ACT. He played a major role in the outcomes assessment

David A. Lutz

area, including the development and use of the Collegiate Assessment of Academic Proficiency (CAAP) by more 600 colleges and universities since CAAP's inception. He currently is retired and is working as a consultant.

Marla Mamrick Marla Mamrick is a master's student in higher education and student affairs with an emphasis higher education administration. Currently, she works for the National Resource Center for The First-Year Experience and Students in Transition as a graduate assistant for research and project development. Marla has been closely involved in the development of a course evaluation for University 201 – Fundamentals of Inquiry and assists the Center with other research initiatives. Prior to attending graduate school, she worked for the Office of the University Registrar at The Ohio State University for five years. Her research interests include survey development and data analysis.

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Barbara J. Millis Barbara J. Millis has been a frequent presenter at professional conferences and meetings such as the American Association for Higher Education, the Lilly Teaching Conference, the Council of Independent Colleges, and for a variety of colleges and universities. She has published on such varied topics as faculty development, learning communities, faculty and student portfolios, mentoring, TQM, syllabus construction, and peer classroom observation to improve teaching. She co-authored, with Philip Cottell, the 1998 book *Cooperative Learning for Higher Education Faculty*, originally from Oryx Press, and now available through Greenwood Press. Millis holds a PhD in English literature from Florida State University, is director of faculty development at the U.S. Air Force Academy, and was previously the assistant dean of faculty development at the University of Maryland University College.

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Libby V. Morris

Patricia H. Murrell serves as director of the Center for the Study of Higher Education and professor of higher and adult education at the University of Memphis. Since 1994, Murrell has served as director of the Community College Student Experiences Questionnaire (CC-SEQ) Research Project. She has received the Distinguished Teacher Service Award from the University of Memphis, the Crader Award from the College of Education, and has twice been cited for superior performance in university research. She frequently serves as a consultant to colleges, professional organizations, nonprofit groups, and corporations and has written more than 50 articles, books, and book chapters on learning styles, outcomes assessment, and adult development theory in professional performance. Murrell received her doctor of education degree from the University of Mississippi.

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David R. Palmer

Jerry Pattengale speaks regularly on campuses and at national conferences and serves on the National Advisory Board for The National Resource Center for The First-Year Experience and Students in Transition (2003-2006). He co-edited *Visible Solutions for Invisible Students: Helping Sophomores Succeed* (University of South Carolina, 2000) and has written articles and developed tools on motivational theory and on creative funding solutions for student success initiatives. In addition to teaching awards and an NEH fellowship to Greece, he was recognized as an Outstanding First-Year Student Advocate by Houghton Mifflin and the National Resource Center in 2000. He is a professor and an assistant vice president at his alma mater, Indiana Wesleyan University where he also oversees and teaches annually in the first-year seminar program. He received a doctorate in ancient history from Miami University (OH) and holds masters degrees from

Jerry Pattengale

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Judy Patton Judy Patton is director of university studies at Portland State University (PSU). She is a National Fellow with the National Learning Communities Project housed at The Washington Center for Improving the Quality of Undergraduate Education. Patton was a member of the Kellogg Forum of Higher Education Transformation and was a member of the Civic Learning Cluster, a 10-institution collaboration led by NERCHE, that resulted from that work. She was the project director for the Quality Assurance Collaborative and for the Restructuring for Urban Student Success Project with PSU, Temple University and Indiana University Purdue University at Indianapolis. She has published in the areas of general education, higher education reform, learning communities, community-based learning, and assessment. She received her BA in dance at the University of California, Santa Barbara and a masters in interdisciplinary study from Reed College.

Karen Paulson Karen Paulson is a senior associate at the National Center for Higher Education Management Systems (NCHEMS). A member of the staff since 1996, she focuses on curricular, assessment, faculty, and distance-learning issues as well as state postsecondary needs assessments. During 2001-2002, she worked on behalf of NCHEMS, in collaboration with the Policy Center on the First Year of College, on a major initiative called the "Data Audit and Analysis Project." Based on her involvement with the project, she authored the *Data Audit and Analysis Toolkit to Support Assessment of the First College Year*. She conducts evaluations for several grants in addition to working on activities to ensure appropriate data are available for state-level higher education policy making. She was a program associate with the National Center for Public Policy and Higher Education for 2001-2002.

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Marie Revak Marie Revak is the coordinator of professional learning services for the Lewis-Palmer School District in Monument, Colorado and the former director of academic assessment and associate professor of mathematical sciences at the U.S. Air Force Academy. She has a BA in mathematics from Rutgers University, an MA in mathematics education from Rowan University (formerly Glass-

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Beth Richter, senior director of retention products at Noel-Levitz, works directly with colleges and universities nationwide in student retention. Offering 16 years of experience, Richter provides service and leadership to educators seeking to enhance student success and improve student retention through the Retention Management System™ and its College Student Inventory. She is co-author of, *Strategic Moves for Retention Success*, with Lee Noel and Randi Levitz, published in the winter 1999 edition of *New Directions for Higher Education*. Richter has an MA in teaching English, tutors international students, and is finalizing coursework toward a PhD in social foundations of education at the University of Iowa.

Beth Richter

Linda J. Sax is associate professor in-residence, director of the Cooperative Institutional Research Program (CIRP), and associate director of the Higher Education Research Institute at UCLA. In that capacity, she is responsible for CIRP's annual survey of incoming first-year students, two annual surveys of continuing college students, and a triennial survey of college faculty. The recipient of the 1999 Early Career Award from the Association for the Study of Higher Education, Sax's research focuses on gender differences in college student development, specifically how institutional characteristics, peer and faculty environments, and forms of student involvement may differentially affect male and female college students.

Linda J. Sax

Debora Scheffel is currently the director for university assessment at the University of Northern Colorado in Greeley, Colorado. She has been a visiting scholar at the United States Air Force Academy, Center for Educational Excellence and has presented and published in the area of academic assessment. Scheffel received her PhD from Northwestern University, Evanston, IL, in communication sciences and disorders and completed a post-doctoral fellowship at the University of California, San Diego, in cognitive psychology. Her interests include brain-behavior relationships and learning, classroom and program assessment, and reform in higher education.

Debora L. Scheffel

Michael J. Siegel serves as research fellow with the Policy Center on the First Year of College, a national level educational policy center supported by The Atlantic Philanthropies and Lumina Foundation for Education. He is responsible for a wide range of writing projects and research initiatives aimed at improving the first college year. Currently, he is coordinating the Phase II process for affiliate institutions as part of the Center's Foundations of Excellence™ in the First College Year project. He also serves as the manager and editor of the Policy Center's First-Year Assessment Listserv (FYA-List), recruiting

Michael J. Siegel

and working with authors to post invited essays on assessment and other topics. Siegel holds a PhD in higher education and a minor in anthropology from Indiana University. His book, *Primer on Assessment of the First College Year*, was published by the Policy Center in 2003.

Tracy L. Skipper Tracy L. Skipper is editorial projects coordinator for the National Resource Center for The First-Year Experience and Students in Transition at the University of South Carolina. Prior to her work at the Center, she served as director of residence life and judicial affairs at Shorter College in Rome, Georgia, where her duties included teaching in the college's first-year seminar program and serving as an academic advisor for first-year students. She also served as director of student activities and residence life at Wesleyan College. Skipper teaches first-year English and University 101 at USC. She holds a bachelor's degree in psychology from USC, a master's degree in higher education from Florida State University, and a master's in American literature from USC. She is currently pursuing a doctorate in rhetoric and composition and has a research interest in the teaching of writing in first-year seminars.

Linda Suskie Linda Suskie is director of assessment at Towson University, past director of the American Association for Higher Education's Assessment Forum, and past fellow at the Middle States Commission on Higher Education. Her higher education experience also includes work in institutional research and strategic planning and teaching graduate courses in assessment and research methods and undergraduate courses in writing, statistics, and developmental mathematics. Suskie has spoken, consulted, written, and presented workshops on a broad variety of assessment topics. Her latest book, *Assessment of Student Learning: A Common Sense Guide*, is slated for publication by Anker in early 2004.

Randy L. Swing Randy L. Swing serves as co-director and senior scholar of the Policy Center on the First Year of College, located at Brevard College in Brevard, North Carolina. During the Center's first three years, his work focused on developing and disseminating new tools and techniques for evaluating the efficacy of first-year programs. His leadership roles included contributions to two national surveys of first-year students, *Your First College Year* (YFCY) and the *First-Year Initiative* (FYI) benchmarking survey. Until 1999, Swing worked for 20 years in various first-year programs at Appalachian State University. Most recently, as founding director of the Assessment Office he developed and initiated a longitudinal, campus-wide assessment program with focus on learning outcomes. Prior to earning a doctoral degree in higher education from the University of Georgia, he earned his MA and EdS degrees in student development from Appalachian State

University and a BA in psychology from the University of North Carolina – Charlotte. He serves on the Review Board for the *Journal on Excellence in College Teaching* and *Innovative Higher Education* and is a fellow of the National Resource Center for The First-Year Experience and Students in Transition. Swing's current work includes a large-scale project to establish "Foundations of Excellence in the First College Year" with the Council for Independent Colleges and the American Association for State Colleges and Universities.

John Ward has served as a vice president at the Clearinghouse since it was formed in 1993 and has more than 30 years experience in strategic planning, product development, client service, and sales. Previously, he led the team that grew Clearinghouse participation to include 2,700 colleges and universities. He also directed corporate communication activities and the launch of several higher education services. Ward is a frequent speaker at conferences geared to college financial aid managers, registrars, admissions officers, and higher education loan program directors. Before joining the Clearinghouse, he held several positions at Sallie Mae, including managing strategic planning, product development, client service, and regional banking. Prior to his career in student finance, he was in commercial banking. Ward has a BA from Amherst College and an MBA from Syracuse University.

John Ward

Claire Ellen Weinstein is a professor in the Department of Educational Psychology and Chair of the Doctoral Concentration in Learning, Cognition, and Instruction at the University of Texas at Austin. She is also the director of the Cognitive Learning Strategies Research Project. Weinstein was recently inducted as a fellow of the American Council of Developmental Education Associations and is a member of the governing council of the American Psychological Association. She has more than 130 publications, including an assessment instrument called the Learning and Study Strategies Inventory (LASSI) that is used in more than 75% of the colleges and universities in the United States and has been translated into more than 30 languages.

Claire Ellen Weinstein

Jean Yerian began work at Virginia Commonwealth University in 1979. She served as director of the career center, associate dean of student affairs, and assistant to the vice provost for academic affairs before becoming director of assessment. During a recent year's leave of absence, she worked with Zayed University faculty in Dubai and Abu Dhabi, United Arab Emirates, shaping a learning-outcomes-based curriculum for women leaders.

Jean M. Yerian

Lissa J. Yogan, PhD is currently the chair of the department of sociology and criminology at Valparaiso University. She received her doctorate in sociology from the University of Notre Dame. She regularly teaches courses on research methods, social stratification, gender, and cultural issues. Her research has looked at gender effects in

Lissa J. Yogan

school violence and the relationship between teen dating and critical thinking. Her work in this volume arises from her interest in interdisciplinary teaching and faculty/administrator collaboration.

Titles of Interest to Assessment Professionals from
the National Resource Center for The First-Year Experience &
Students in Transition

Monograph 33. *Proving and Improving: Strategies for Assessing the First College Year.* Randy L. Swing, Editor. Drawn from the First-Year Assessment Listserv, which is hosted by the Policy Center on the First Year of College and the National Resource Center, this collection provides essays by the nation's best theorists and practitioners of first-year college assessment. Contributors outline the essentials of effective assessment efforts, provide a philosophical rationale for those essentials, describe methods and strategies for assessment, and provide examples designed for institutions and specific programs. Written from the perspective of practitioners in a wide range of disciplines and organizational structures, these essays are accessible and valuable to the novice and veteran practitioner alike. 140 pages. ISBN 1-889271-37-3. \$20.00.

Primer for Research on the College Student Experience. Dorothy S. Fidler and Jean M. Henscheid. This booklet gives an overview of strategies for designing, conducting, and publishing research on the college student experience. 68 pages. \$15.00.

Guidelines for Evaluating The First-Year Experience at Two-Year Colleges* and *Guidelines for Evaluating The First-Year Experience at Four-Year Colleges. 2nd Edition. John N. Gardner, Betsy O. Barefoot, and Randy L. Swing. These guidelines provide institutions with a framework for assessing the first-year experience on their own campuses. Originally developed by John Gardner in 1990, *Guidelines for Evaluating The First-Year Experience* has been revised and updated by the staff of the Policy Center on the First Year of College with input from 65 institutions participating in five regional consortia focused on first-year assessment issues. *Guidelines* is now available in two special editions, one focusing on two-year institutions and one focusing on four-year institutions. If you are looking for a way to evaluate the first-year experience on your campus, make *Guidelines* your starting point! 24 pages. \$7.00 each/\$5.00 each when sold in units of 10.

Annotated Bibliography on Assessment of the First College Year. Marc Cutright and Michelle Rodems. An annotated bibliography concentrated on the evaluation of programs for first-year students and the improvement of those programs through evaluation. The bibliography focuses on print information published in the past decade. Both four-year and two-year literature is considered. 79 pages. ISBN 0-9726527-2-8. \$20.00.

Primer on Assessment of the First College Year. Michael J. Siegel. This primer is a guidebook on assessment of the first college year. It is intended for beginning as well as veteran practitioners who are responsible for a wide range of assessment activities related to evaluation the learning experience and outcomes of first-year college and university students. It probes key campus issues related to first-year assessment and offers a comprehensive overview of first-year assessment strategies, methods, and tools. 122 pages. ISBN 0-9726527-0-1. \$20.00.

Data Audit and Analysis Toolkit to Support Assessment of the First College Year. Karen Paulson. A process for identifying and using information resources in existence on campuses in assessment practice. Technical Manual, Administrative Rationale, and CD-ROM are packaged in a three-ring binder. A joint project of the Policy Center on the First Year of College and the National Center for Higher Education Management Systems. \$50.00.

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